







OFFICIAL YEAR BOOK  
OF THE COMMONWEALTH OF AUSTRALIA

YEAR BOOK

OF THE  
COMMONWEALTH OF AUSTRALIA

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PREFACE

# OFFICIAL YEAR BOOK OF THE COMMONWEALTH OF AUSTRALIA

No. 57, 1971

*Prepared under instructions from the Honourable the Treasurer by*

**J. P. O'NEILL**

**ACTING COMMONWEALTH STATISTICIAN**

**COMMONWEALTH BUREAU OF CENSUS AND STATISTICS**

**CANBERRA, AUSTRALIA**

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OF THE  
COMMONWEALTH

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## PREFACE

By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered, subject to the Constitution, 'to make laws for the peace, order, and good government of the Commonwealth, with respect to . . . Census and statistics.' In the exercise of the power so conferred, a Census and Statistics Act was passed in 1905, and in the year following the Commonwealth Bureau of Census and Statistics was created. The first Official Year Book was published early in 1908. The publication here presented is the fifty-seventh Official Year Book issued under the authority of the Commonwealth Government.

The special index (preceding the general index) provided at the end of the volume, together with certain references given in the various chapters, will assist in tracing in previous issues special articles and other more or less important miscellaneous matter which, in order to conserve space, have been omitted or abbreviated in the present volume. Where, in the general index, more than one reference to a subject is given, the chief reference (or references) has been specially indicated wherever possible.

While the number of pages has not altered significantly with this edition, there has been a substantial saving in bulk through the adoption of a paper of lighter weight.

Among new or revised material included the following items may be especially mentioned.

Chapter 7. Population. The Appendix contains preliminary field count totals from the 1971 Census of Population and Housing.

Chapter 10. Labour, Wages and Prices. Details of a new wholesale price index relating to materials used in house building, page 232. A new average weekly earnings series, *see* Appendix page 1065.

Chapter 12. Transport, Communication and Travel. A table showing freight carried by private railways, page 349.

Chapter 15. Law, Order, and Public Safety. Description of the legislative provisions in relation to the control of drugs, and statistics of drug offences, page 442.

Chapter 17. Private Finance. New tables showing the housing finance activity of savings banks, page 491.

Chapter 20. Education, Cultural Activities, and Research. The section on research has been reorganised with a view to expansion in future issues. On page 681 there is a short note on productivity promotion.

Chapter 21. Employment and Unemployment. Results of a survey of labour force experience (aspects such as occupation and level of schooling, period employed or unemployed, pattern of leave taking). Results of the 1970 survey of school leavers are also given, continuing the annual series of recent years. The Appendix contains revisions to the agricultural and non-agricultural components of the Labour Force series.

Chapter 22. Manufacturing Industry. Statistics from the 1968-69 Census of Manufacturing and Electricity and Gas Establishments, which was one of the series of economic censuses conducted on an integrated basis for the first time.

Chapter 23. Rural Industry. The functions of the Australian Wool Commission, established in November 1970, are set out on page 802.

Chapter 27. Mineral Industry. Statistics from the Census of Mining Establishments for 1968-69, one of the series of integrated economic censuses.

Chapter 30. Miscellaneous. Statistics from the 1968-69 integrated economic censuses of wholesale, retail and selected service establishments. Comprehensive statistics concerning the operations of wholesale establishments have not been collected previously. Results are also given of a survey concerning journey to work or school, dealing with aspects such as departure time, duration of journey and method of travel.

The usual series of graphs has been updated.

The material in the Year Book has been carefully checked throughout, but I shall be grateful to those who will be kind enough to point out defects or make suggestions.

The statistics contained in the majority of the chapters of this volume relate to the years ended June or December 1970. More detailed statistics on subjects dealt with in the Year Book are available in the various annual reports published by this Bureau, and more recent statistics are contained in the *Digest of Current Economic Statistics* (monthly), the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, and in other publications issued monthly, quarterly, half-yearly, or yearly. The last pages of this volume contain a list of current and recent printed publications available for purchase, showing issue numbers, dates, and prices.

A State Year Book is published by the Deputy Commonwealth Statistician of each State. These publications contain greater statistical detail and additional supplementary material concerning the individual States which cannot be accommodated in the Commonwealth Year Book. The Deputy Commonwealth Statisticians of all States also issue Pocket Year Books and a number of printed and mimeographed publications dealing with their respective States. These publications are listed, together with publications of the Central Office, in *Publications of the Commonwealth Bureau of Census and Statistics* issued annually by this Bureau.

My thanks are tendered to the Deputy Commonwealth Statisticians of the several States, who have collected and compiled the data on which a great part of the information given in the Year Book is based. Thanks are also tendered to the responsible officers of the various Commonwealth and State Departments and to others who have kindly, and often at considerable trouble, supplied information, and to the Government Printer and his staff for their services in printing this Year Book and in assisting and advising throughout its preparation.

J. P. O'NEILL  
Acting Commonwealth Statistician

Commonwealth Bureau of Census and Statistics,  
Canberra, A.C.T. 2600. November 1971



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## SYMBOLS AND OTHER FORMS OF USAGE IN THIS YEAR BOOK

The following *symbols*, where shown in tables, mean:

- n.a. —not available
- . . —nil or less than half the final digit shown, or not applicable
- p —preliminary—figure or series subject to revision
- r —figure or series revised since previous issue
- n.e.i.—not elsewhere included
- n.e.c.—not elsewhere classified
- n.s. —not stated
- m.—males; f.—females; p.—persons
- Break in continuity of series (where drawn across a column between two consecutive figures).

A blank space in a column of figures means that the figure concerned is not yet available.

The following *abbreviations* are used for the titles of the Australian States and Territories and the Commonwealth of Australia: N.S.W. (New South Wales), Vic. (Victoria), Qld (Queensland), S.A. (South Australia), W.A. (Western Australia), Tas. (Tasmania), N.T. (Northern Territory), A.C.T. (Australian Capital Territory), T.P.N.G. (Territory of Papua and New Guinea), Aust. (Australia), Cwlth (Commonwealth).

In general, the *statistics in this volume relate to the States and Territories of the Commonwealth of Australia*, i.e. they exclude particulars of the External Territories of Australia, which, however, are specifically dealt with in Chapter 29, The Territories of Australia. A few series elsewhere include particulars of the Territory of Papua and New Guinea because of the nature of the subject-matter—these series are indicated.

*Yearly periods* shown as e.g. 1970 refer to the year ended 31 December 1970; those shown as e.g. 1969–70 refer to the year ended 30 June 1970. Other yearly periods are specifically indicated. The range of years shown in table headings, e.g. 1901 to 1969–70, indicates the period covered, but does not necessarily imply that each intervening year is included.

*Values* are shown in Australian dollars (\$) or \$A) or cents (c) unless another currency is specified.

*Any discrepancies between totals and sums of components* in tables are due to rounding.

water or contained another continent. In command of H.M.S. *Endeavour*, and accompanied by Sir Joseph Banks the botanist, Dr Solander the naturalist, Green the astronomer, draughtsmen, and servants, Cook, after observing the transit of Venus at Tahiti, turned towards New Zealand, sighting that land on 7 October 1769 in the neighbourhood of Poverty Bay. Circumnavigating the North and South Islands, he proved that New Zealand was connected neither with the supposed Antarctic Continent nor with Australia, and took formal possession thereof in the name of the British Crown.

#### Discovery of Australia by Captain Cook

On 20 April 1770\* Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, on 29 April 1770\* he discovered Botany Bay, where he landed. Cook sailed along the coast in a northerly direction for nearly 1,300 miles until 11 June 1770, when the *Endeavour* was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months, and the *Endeavour* then again set her course to the north sailing through Torres Strait and anchoring in the Downs on 13 July 1771. In 1772 Cook was put in command of the ships *Resolution* and *Adventure* with a view to ascertaining whether a great southern continent existed. Having satisfied himself that, even if it did, it lay so far to the south as to be useless for trade and settlement, he returned to England in 1774. Cook's last voyage was undertaken in 1776, and he met his death on 14 February 1779, by which date practically the whole coast of Australia had been explored. The only remaining discovery of importance, the existence of a channel between Tasmania and Australia, was made by Bass and Flinders in 1798.

### The annexation of Australia

#### Possession taken of eastern coast of Australia by Captain Cook

Although representatives of the nations mentioned in the previous section landed or claimed to have landed on the shores of Australia on various occasions during the sixteenth and seventeenth centuries, it was not until 22 August 1770† that the history of Australia was brought into definite political connection with western civilisation. It was on that date that Captain Cook took possession 'of the whole eastern coast, from latitude 38° S. to this place, latitude 10½° S. in right of His Majesty King George the Third', i.e. over only what are now the eastern parts of New South Wales, Victoria and Queensland.

#### Annexation of eastern part of Australian continent and Tasmania

Formal possession, on behalf of the British Crown, of the whole of the eastern part of the Australian continent and Tasmania was not taken until 26 January 1788, when Captain Phillip's Commission, first issued to him on 12 October 1786 and amplified on 2 April 1787, was read to the people whom he had brought with him in the 'First Fleet'. The commission appointed Phillip 'Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south'.

#### Extension of New South Wales westward

On 17 February 1824 Earl Bathurst notified Sir Thomas Brisbane that he had recommended to His Majesty the dispatch of a ship of war to the north-west coast of New Holland for the purpose of taking possession of the coast between the western coast of Bathurst Island and the eastern side of Coburg Peninsula. Captain James J. Gordon Bremer of H.M.S. *Tamar*, who was selected for the purpose, took possession on 20 September 1824 of the coast from the 135th to the 129th degree of east longitude. On 16 July 1825 the whole territory between those boundaries was described in Darling's commission as being within the boundaries of New South Wales.

\* Year Book No. 1 shows the dates of these events as '19th April' and '28th April' respectively. In Year Book No. 2 they had been changed to '20th of April' and '29th April', and the following footnote inserted:

1. *Correct dates of Captain Cook's Log.* After the 180° meridian of longitude had been passed, and owing to no allowance having been made for westing, the various log-books of this voyage are in error one day as to dates. Thus those in Captain Cook's private log, in his official log, in Gunner Forwood's, Pickersgill's, Clerke's, Wilkinson's, and Bootie's Journals, in the Pallister copy of Cook's log, and in Wharton's publication, all need correction by adding one day to the date given; that is, the 19th should read the 20th, etc. The anonymous log, doubtless Green's, is erroneously supposed by the author of the "Historical Records of New South Wales." to have been corrected for westing, see the foot-note on page 269 therein. The facts are as follows:—What was known as "ship time" began a day earlier than under the present system of astronomical reckoning, that is to say, Jan. 1 began at noon Dec. 31. The "Astronomical day," however, was a whole day later than the *ship's day*; thus what would be assigned to the 24th in Cook's Journal would appear in Green's Journal as the 23rd. (See "Captain Cook's Journal," 1768-71, by Captain W. J. L. Wharton, R.N., F.R.S., London, 1893, preface pp. xii., xiii.) There can be no doubt as to the need of the correction in the dates, since on reaching Batavia the log reads:—"Wednesday 10th, according to our reckoning, but by the people here Thursday 11th." (Op. Cit., pp. 352-3.) Attention was drawn to this matter by Mr. P. de Jersey Grut in the "Argus," Melbourne, May 15, 18 and 22, 1907.

† In all previous issues of the Year Book this date was incorrectly shown as 23 August 1770.



### Annexation of Western Australia

An expedition under Major Lockyer, sent by Lieutenant-General Sir Ralph Darling, then Governor of New South Wales, to found a settlement at King George Sound, sailed from Sydney on 9 November 1826, landed at the Sound on 26 December following, and on 21 January 1827 hoisted the British flag. Captain Stirling, in command of H.M.S. *Success*, arrived at Sydney a few weeks after the departure of the expedition to King George Sound. He obtained the Governor's permission to visit Swan River with a view to seizing a position on the western coast and reporting upon its suitability as a place of settlement. Captain Stirling left Sydney on 17 January 1827, and on his return in the following April submitted a glowing report on what he described as a 'rich and romantic country', urging its occupation for the purpose of settlement. He left for England in July 1827, continuing his advocacy, notwithstanding much discouragement, with unabated enthusiasm. He was at last successful, the result being due mainly to the formation of an association of prospective settlers having capital at their disposal. He was appointed Lieutenant-Governor and with a party of settlers arrived at Garden Island, near the Swan River, in the ship *Parmelia* in June 1829. On the second of the preceding month Captain Fremantle, in command of H.M.S. *Challenge*, arrived and hoisted the British flag on the south head of Swan River, again asserting possession of 'all that part of New Holland which is not included within the territory of New South Wales'. Thus before the middle of 1829 the whole territory now known as the Commonwealth of Australia had been constituted a dependency of the United Kingdom.

### The creation of the several Colonies

#### New South Wales

In Governor Phillip's commission of 1786 the mainland of Australia was divided by the 135th meridian of east longitude into two parts. The earliest colonists believed that the present State of Tasmania was actually joined to the mainland, and it was not until 1798 that the contrary was known. In that year Bass and Flinders proved that it was an island by sailing through Bass Strait. The territory of New South Wales, as originally constituted (1,480,527 square miles, including Van Diemen's Land, 26,215 square miles), and of New Zealand (103,862 square miles), which may be included although Cook's annexation was not properly given effect to until 1840, consisted of 1,584,389 square miles. A further area of 518,134 square miles was added in 1825 when the western boundary was extended to the 129th east meridian. The territory was subsequently reduced by the separation of various areas to form the other colonies, and at the time of the establishment of the Commonwealth the area of New South Wales was 310,372 square miles. Following the transfer of the Australian Capital Territory and an area at Jervis Bay to the Commonwealth in 1911 and 1915 respectively the area was further reduced to 309,433 square miles.

Lord Howe Island, which is a dependency of New South Wales, and for political purposes is included in one of the electorates of Sydney, is situated in latitude 31° 30' south, longitude 159° 5' east, about 487 miles east-north-east of Sydney, and has an area of 3,220 acres.

#### Tasmania

Van Diemen's Land, first settled in 1803, was politically separated from New South Wales in 1825, being constituted a separate colony on 14 June. The area of the colony was 26,215 square miles. The name of the colony was officially changed to Tasmania in 1856 when responsible government was established. Following a resurvey of local government areas, the area of Tasmania was determined at 26,383 square miles at the end of 1964.

Macquarie Island, about 1,000 miles south-east of Hobart, together with a few rocky islets nearby, has been a dependency of Tasmania since the nineteenth century. In December 1911 five members of the Australasian Antarctic Expedition landed on the island and remained there until 1915. On 3 March 1948 another party was landed to man a new station which has since been maintained as a scientific base. The island is about twenty-one miles long and two miles wide.

#### Western Australia

The territory westward of the 129th meridian, comprising 975,920 square miles, was constituted a colony under the name of Western Australia in June 1829. It was always distinct and independent of New South Wales, except for the settlement on King George Sound (*see above*), which remained under the jurisdiction of New South Wales until 1831.

#### South Australia

On 15 August 1834 the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a 'province', and settlement took place towards the end of the year 1836. The first Governor, Captain Hindmarsh, R.N., arrived at Holdfast Bay on 28 December 1836, and on the same day the new colony was officially proclaimed. The new colony embraced 309,850 square miles of territory, lying south of the 26th parallel of south latitude and between the 141st\* and 132nd

\* The actual surveyed boundary is at 140° 58' east longitude.

meridians of east longitude. On 10 December 1861, by authority of the Imperial Act 24 and 25 Vict., cap. 44, the western boundary of South Australia was extended to coincide with the eastern boundary of Western Australia, namely, the 129th east meridian. The area of the extension was approximately 70,220 square miles. Nearly two years later, on 6 July 1863, the Northern Territory, comprising 523,620 square miles, was brought under the jurisdiction of South Australia, which thereupon controlled an area of 903,690 square miles. The Territory was transferred to the Commonwealth on 1 January 1911 (*see* page 5). Following a resurvey of Northern Territory notified in 1964 the area was reduced by 3,340 square miles.

#### New Zealand

Although Captain Cook had taken possession of the North Island of New Zealand in November 1769, and of the South Island in January 1770, it is doubtful whether at the time when Captain Phillip's commission was drawn up New Zealand was considered as one of the 'islands adjacent in the Pacific Ocean' (*see* page 2). The fact that under the Supreme Court Act (Imperial) of 1823 British residents in New Zealand were brought under the jurisdiction of the Court at Sydney, and that in 1839 there was a proposal on the part of the British Government to appoint a consul in New Zealand, leaves this an open question, as nothing more than extra-territorial jurisdiction may have been intended. New Zealand does not appear to have become British territory unequivocally until 1840, when Captain Hobson arrived at the Bay of Islands, and on 30 January read his commissions, which extended the boundaries of the Colony of New South Wales so as to embrace and comprehend the islands of New Zealand. In February 1840 the Treaty of Waitangi, made with the native chiefs, was signed. Finally, on 21 May 1840 British sovereignty over the islands of New Zealand was explicitly proclaimed. New Zealand remained a dependency of New South Wales until, by letters patent of 16 November 1840, it was constituted a separate colony under the powers of the Act 3 and 4 Vict., cap. 62, of 7 August 1840. Proclamation of the separation was made on 3 May 1841. The area of the colony was 103,862 square miles. The present area of New Zealand, which acquired responsible government on 7 May 1856 and Dominion status on 26 September 1907, exclusive of island territories but including minor islands, is 103,736 square miles.

#### Victoria

In 1851 the 'Port Phillip District' of New South Wales was constituted the colony of Victoria, 'bounded on the north and north-west by a straight line drawn from Cape Howe to the nearest source of the River Murray and thence by the course of that river to the eastern boundary of the colony of South Australia'. The area of the new colony was 87,884 square miles, and its separate existence took effect from 1 July 1851.

#### Queensland

The northern squatting districts of Moreton, Darling Downs, Burnett, Wide Bay, Maranoa, Leichhardt, and Port Curtis, together with the reputed county of Stanley, were granted an independent administration and formed into a distinct colony under the name of Queensland by letters patent dated 6 June 1859, although separation from New South Wales was not completed until 10 December of the same year. The territory comprised by the new colony was 'so much of the colony of New South Wales as lies northwards of a line commencing on the sea-coast at Point Danger in latitude about 28° 8' south, running westward along the Macpherson and Dividing Ranges and the Dumaresq River to the MacIntyre River, thence downward to the 29th parallel of south latitude, and following that parallel westerly to the 141st meridian of east longitude, which is the eastern boundary of South Australia, together with all the adjacent islands, their members, and appurtenances in the Pacific Ocean'. The area of the colony thus constituted was 554,300 square miles. By letters patent dated 13 March 1861, forwarded by the Colonial Secretary to the Governor of Queensland on 12 April 1862, the area of Queensland was increased by the annexation of 'so much of the colony of New South Wales as lies to the northward of the 26th parallel of south latitude, and between the 141st and 138th meridians of east longitude, together with all and every the adjacent islands, their members, and appurtenances, in the Gulf of Carpentaria'. With this addition the area of Queensland became 670,500 square miles. Following a thorough revision of the area of each local government area of Queensland, based on the most recent maps available, the Surveyor-General in 1958 determined the area of Queensland as 667,000 square miles—a reduction of 3,500 square miles from the area previously determined.

### The establishment of the Commonwealth of Australia

#### Federation

On 1 January 1901 the colonies mentioned, with the exception of New Zealand, were federated under the name of the 'Commonwealth of Australia', the designation of 'Colonies'—except in the case of the Northern Territory, to which the designation 'Territory' applied—being at the same time changed to that of 'States'.



**Transfer of the Northern Territory to the Commonwealth**

On 7 December 1907 the Commonwealth and the State of South Australia entered into an agreement for the transfer of the Northern Territory to the Commonwealth, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under The Northern Territory Surrender Act, 1907 and by the Commonwealth Parliament under the *Northern Territory Acceptance Act* 1910. The Territory was formally transferred to the Commonwealth on 1 January 1911, and became the Northern Territory of Australia.

By Imperial Order in Council dated 23 July 1931 Ashmore Islands, known as Middle, East and West Islands, and Cartier Island, situated in the Indian Ocean off the north-west coast of Australia, were placed under the authority of the Commonwealth. The islands were accepted by the Commonwealth on 10 May 1934, in the *Ashmore and Cartier Islands Acceptance Act* 1933, under the name of the Territory of Ashmore and Cartier Islands. The Act authorised the Governor of Western Australia to make ordinances having the force of law in and in relation to the Territory. An amendment to the Act in July 1938 annexed the islands to the Northern Territory, whose laws, ordinances, and regulations, wherever applicable, thereupon applied.

The area of Ashmore Reef is approximately 60 square miles (to the limit of the reef), and it is situated 220 statute miles off the western coast of Australia and 520 statute miles west of Darwin. Cartier Island is approximately 17 square miles in area (to the limit of the reef), and is situated 184 statute miles off the western coast of Australia and 490 statute miles west of Darwin.

**Transfer of the Australian Capital Territory to the Commonwealth**

On 18 October 1909 the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 911 square miles as the Seat of Government of the Commonwealth. In December 1909, Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on 5 December 1910 a proclamation was issued vesting the Territory in the Commonwealth on and from 1 January 1911. By the *Jervis Bay Territory Acceptance Act* 1915 an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth, and was transferred as from 4 September 1915.

**Present composition of the Commonwealth**

Following revision of the areas of Tasmania, Queensland and the Northern Territory, as mentioned on pages 3 and 4, the total area of the Commonwealth of Australia has been determined as 2,967,909 square miles. The years in which the respective areas were annexed, the years of first permanent settlement, and the years in which responsible government was granted to the Colonies, and the present areas of the several States and Territories and of the Commonwealth are shown below.

**THE COMMONWEALTH OF AUSTRALIA: COMPONENT STATES AND TERRITORIES**

<i>State or Territory</i>	<i>Year of annexation</i>	<i>Year of first permanent settlement</i>	<i>Year of formation into separate Colony or Territory</i>	<i>Year in which responsible government was granted</i>	<i>Present area in square miles</i>
New South Wales . . . . .	1770	1788	1786	1855	309,433
Victoria . . . . .	1770	1834	1851	1855	87,884
Queensland . . . . .	1770	1824	1859	(a) 1859	667,000
South Australia . . . . .	1788	1836	1834	1856	380,070
Western Australia . . . . .	1829	1829	1829	1890	975,920
Tasmania . . . . .	1788	1803	1825	1855	26,383
Northern Territory . . . . .	..	..	(b) 1863	..	520,280
Australian Capital Territory . . . . .	..	..	(c) 1911	..	939
<b>Commonwealth of Australia</b> . . . . .	..	..	..	(d)	<b>2,967,909</b>

(a) As part of New South Wales in 1855; as a separate colony in 1859. (b) Previously part of New South Wales then brought under the jurisdiction of South Australia in 1863—transferred to the Commonwealth in 1911. (c) Previously part of New South Wales. (d) Constituted as from 1 January 1901.

## The Constitution of the Commonwealth

Information regarding the development of the Constitutions of the various Colonies (now States), together with a brief history of the federal movement in Australia, was embodied in this chapter in issues of the Year Book up to and including No. 22.

### Commonwealth Constitution Act

The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely: 'An Act to constitute the Commonwealth of Australia', as amended by the *Constitution Alteration (Senate Elections)* 1906, the *Constitution Alteration (State Debts)* 1909, the *Constitution Alteration (State Debts)* 1928, the *Constitution Alteration (Social Services)* 1946, and the *Constitution Alteration (Aboriginals)* 1967, is given in *extenso* hereunder, and the text contains all the alterations of the Constitution which have been made up to and including 31 December 1969.

### THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT.

63 & 64 VICT., CHAPTER 12.

*An Act to Constitute the Commonwealth of Australia. (9th July, 1900.)*

WHEREAS the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established:

And whereas it is expedient to provide for the admission into the Commonwealth of other Australasian colonies and possessions of the Queen:

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled and by the authority of the same, as follows:—

1. This Act may be cited as the Commonwealth of Australia Constitution Act.
2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.
3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation, appoint a Governor-General for the Commonwealth.
4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies may at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.
5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State: and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.
6. "The Commonwealth" shall mean the Commonwealth of Australia as established under this Act.
- "The States" shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States; and each of such parts of the Commonwealth shall be called "a State."
- "Original States" shall mean such States as are parts of the Commonwealth at its establishment.
7. The Federal Council of Australasia Act, 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.

Any such law may be repealed as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

8. After the passing of this Act the Colonial Boundaries Act, 1895, shall not apply to any colony which becomes a State of the Commonwealth; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.

9. The Constitution of the Commonwealth shall be as follows:—

### THE CONSTITUTION.

This Constitution is divided as follows:—

- Chapter I.—The Parliament:
  - Part I.—General:
  - Part II.—The Senate:
  - Part III.—The House of Representatives:
  - Part IV.—Both Houses of the Parliament:
  - Part V.—Powers of the Parliament:
- Chapter II.—The Executive Government:
- Chapter III.—The Judicature:
- Chapter IV.—Finance and Trade:
- Chapter V.—The States:
- Chapter VI.—New States:
- Chapter VII.—Miscellaneous:
- Chapter VIII.—Alteration of the Constitution.
- The Schedule.

### CHAPTER I.—THE PARLIAMENT.

#### PART I.—GENERAL.

1. The legislative power of the Commonwealth shall be vested in a Federal Parliament, which shall consist of the Queen, a Senate, and a House of Representatives, and which is hereinafter called “The Parliament”, or “The Parliament of the Commonwealth”.

2. A Governor-General appointed by the Queen shall be Her Majesty’s representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen’s pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.

3. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of a Governor-General shall not be altered during his continuance in office.

4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.

5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise, prorogue the Parliament, and may in like manner dissolve the House of Representatives.

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

#### PART II.—THE SENATE.

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division, and in the absence of such provision the State shall be one electorate.



Until the Parliament otherwise provides there shall be six senators for each Original State.\* The Parliament may make laws increasing or diminishing the number of senators for each State, but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified by the Governor to the Governor-General.

8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only once.

9. The Parliament of the Commonwealth may make laws prescribing the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws prescribing the method of choosing the senators for that State.

The Parliament of a State may make laws for determining the times and places of elections of senators for the State.

10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.

11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate.

12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.

13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in number as practicable; and the places of the senators of the first class shall become vacant at the expiration of [the third year] *three years*,† and the places of those of the second class at the expiration of [the sixth year] *six years*,† from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made [in the year at the expiration of which] *within one year before*† the places are to become vacant.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of [January] *July*† following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of [January] *July*† preceding the day of his election.

14. Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places of senators for the State as it deems necessary to maintain regularity in the rotation.

15. If the place of a senator becomes vacant before the expiration of his term of service, the Houses of Parliament of the State for which he was chosen shall, sitting and voting together, choose a person to hold the place until the expiration of the term, or until the election of a successor as hereinafter provided, whichever first happens. But if the Houses of Parliament of the State are not in session at the time when the vacancy is notified, the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State, or until the election of a successor, whichever first happens.

At the next general election of members of the House of Representatives, or at the next election of senators for the State, whichever first happens, a successor shall, if the term has not then expired, be chosen to hold the place from the date of his election until the expiration of the term.

The name of any senator so chosen or appointed shall be certified by the Governor of the State to the Governor-General.

16. The qualifications of a senator shall be the same as those of a member of the House of Representatives.

\* The Parliament has otherwise provided, by means of the *Representation Act* 1948, that the number of senators shall be ten for each State from the first meeting of Parliament after the first dissolution of the House of Representatives occurring after the commencement of the Act (18 May 1948).

† As amended by Section 2 of the *Constitution Alteration (Senate Elections)* 1906. The words in square brackets have been repealed; amendments are shown in italics.

17. The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

18. Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.

19. A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

20. The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.

21. Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth the Governor-General, shall notify the same to the Governor of the State in the representation of which the vacancy has happened.

22. Until the Parliament otherwise provides, the presence of at least one third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.

23. Questions arising in the Senate shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

### PART III.—THE HOUSE OF REPRESENTATIVES.

24. The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner:—

- (i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators;
- (ii) The number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota; and if on such division there is a remainder greater than one-half of the quota, one more member shall be chosen in the State.

But notwithstanding anything in this section, five members at least shall be chosen in each Original State.

25. For the purposes of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.

26. Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows:—

New South Wales . . . .	twenty-three;	South Australia . . . .	six;
Victoria . . . . .	twenty;	Tasmania . . . . .	five;
Queensland . . . . .	eight;		

Provided that if Western Australia is an Original State, the numbers shall be as follows:—

New South Wales . . . .	twenty-six	South Australia . . . .	seven;
Victoria . . . . .	twenty-three;	Western Australia . . . .	five;
Queensland . . . . .	nine;	Tasmania . . . . .	five.

27. Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.

28. Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.

29. Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws for determining the divisions in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provision, each State shall be one electorate.

30. Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State; but in the choosing of members each elector shall vote only once.\*

31. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.

32. The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.

After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.

33. Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.

34. Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows:—

- (i) He must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen:
- (ii) He must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom, or of a Colony which has become or becomes a State, or of the Commonwealth, or of a State.†

35. The House of Representatives shall, before proceeding to the despatch of any other business, choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

36. Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

37. A member may by writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

38. The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House.

39. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.

40. Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

#### PART IV.—BOTH HOUSES OF THE PARLIAMENT.

41. No adult person who has or acquires a right to vote at elections for the more numerous House of the Parliament of a State shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.

\* The Parliament has otherwise provided, by means of the *Commonwealth Electoral Act 1918–1965*, Sections 39 and 39A (repealing an earlier provision made by the *Commonwealth Franchise Act 1902*). For present qualifications see Chapter 3, General Government.

† The Parliament has otherwise provided, by means of the *Commonwealth Electoral Act 1918–1965*, Section 69. For present qualifications see Chapter 3, General Government.



42. Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorized by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.

43. A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

44. Any person who—

- (i) Is under any acknowledgment of allegiance, obedience, or adherence to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power: or
- (ii) Is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer: or
- (iii) Is an undischarged bankrupt or insolvent: or
- (iv) Holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth: or
- (v) Has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons:

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section (iv) does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half-pay, or a pension by any person as an officer or member of the Queen's navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth.

45. If a senator or member of the House of Representatives—

- (i) Becomes subject to any of the disabilities mentioned in the last preceding section: or
- (ii) Takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors: or
- (iii) Directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State:

his place shall thereupon become vacant.

46. Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

47. Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House shall be determined by the House in which the question arises.

48. Until the Parliament otherwise provides, each senator and each member of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.\*

49. The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom, and of its members and committees, at the establishment of the Commonwealth.

50. Each House of the Parliament may make rules and orders with respect to—

- (i) The mode in which its powers, privileges, and immunities may be exercised and upheld;
- (ii) The order and conduct of its business and proceedings either separately or jointly with the other House.

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\* The Parliamentary allowance has been varied from time to time. For current allowances, see Chapter 3, General Government.

## PART V.—POWERS OF THE PARLIAMENT.\*

51. The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to:—

- (i) Trade and commerce with other countries, and among the States:
- (ii) Taxation; but so as not to discriminate between States or parts of States:
- (iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth:
- (iv) Borrowing money on the public credit of the Commonwealth:
- (v) Postal, telegraphic, telephonic, and other like services:
- (vi) The naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth:
- (vii) Lighthouses, lightships, beacons and buoys:
- (viii) Astronomical and meteorological observations:
- (ix) Quarantine:
- (x) Fisheries in Australian waters beyond territorial limits:
- (xi) Census and statistics:
- (xii) Currency, coinage, and legal tender:
- (xiii) Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money:
- (xiv) Insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned:
- (xv) Weights and measures:
- (xvi) Bills of exchange and promissory notes:
- (xvii) Bankruptcy and insolvency:
- (xviii) Copyrights, patents of inventions and designs, and trade marks:
- (xix) Naturalization and aliens:
- (xx) Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth:
- (xxi) Marriage:
- (xxii) Divorce and matrimonial causes; and in relation thereto, parental rights, and the custody and guardianship of infants:
- (xxiii) Invalid and old-age pensions:
- (xxiiiA) †*The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances:*
- (xxiv) The service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States:
- (xxv) The recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States:
- (xxvi) The people of any race [other than the aboriginal race in any State]‡ for whom it is deemed necessary to make special laws:
- (xxvii) Immigration and emigration:
- (xxviii) The influx of criminals:
- (xxix) External affairs:
- (xxx) The relations of the Commonwealth with the islands of the Pacific:
- (xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws:
- (xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth:

\* Particulars of proposed laws which were submitted to referendums are referred to in Chapter 3, General Government, of this Year Book.

† Under Section 2 of the *Constitution Alteration (Social Services)* 1946, the Constitution was amended by the insertion of this paragraph.

‡ Under Section 2 of the *Constitution Alteration (Aboriginals)* 1967, the words in square brackets were omitted.

- (xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State:
- (xxxiv) Railway construction and extension in any State with the consent of that State:
- (xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State:
- (xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides:
- (xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matters is referred, or which afterwards adopt the law:
- (xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia:
- (xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth.

52. The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace, order, and good government of the Commonwealth with respect to—

- (i) The seat of Government of the Commonwealth, and all places acquired by the Commonwealth for public purposes:
- (ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth:
- (iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.

53. Proposed laws appropriating revenue or moneys, or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties, or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.

The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.

The Senate may not amend any proposed law so as to increase any proposed charge or burden on the people.

The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.

Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.

54. The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.

55. Laws imposing taxation shall deal only with the imposition of taxation, and any provision therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.

56. A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.

57. If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of the expiry of the House of Representatives by effluxion of time.



If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and of the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

58. When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

The Governor-General may return to the House in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendation.

59. The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.

60. A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of the Parliament, or by Proclamation, that it has received the Queen's assent.

## CHAPTER II.—THE EXECUTIVE GOVERNMENT.

61. The executive power of the Commonwealth is vested in the Queen and is exercisable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.

62. There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.

63. The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.

64. The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

65. Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.\*

66. There shall be payable to the Queen, out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which, until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.\*

67. Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.

\* The number of Ministers of State and the annual appropriation for their salaries have been varied from time to time. For current particulars, see Chapter 3, General Government.

68. The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

69. On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth:—

Posts, telegraphs, and telephones:	Lighthouses, lightships, beacons, and buoys:
Naval and military defence:	Quarantine.

But the departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

70. In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of his Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

### CHAPTER III.—THE JUDICATURE.

71. The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.\*

72. The Justices of the High Court and of the other Courts created by the Parliament—

- (i) Shall be appointed by the Governor-General in Council:
- (ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity:
- (iii) Shall receive such remuneration as the Parliament may fix; but the remuneration shall not be diminished during their continuance in office.†

73. The High Court shall have jurisdiction, with such exceptions and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments, decrees, orders, and sentences—

- (i) Of any Justice or Justices exercising the original jurisdiction of the High Court:
  - (ii) Of any other federal court, or court exercising federal jurisdiction; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council:
  - (iii) Of the Inter-State Commission, but as to questions of law only:
- and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme Court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

74. No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits inter se of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits inter se of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave.

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to Her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked, but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

\* The *Judiciary Act* 1903 provided for a Chief Justice and two other Justices, increased by subsequent amendments to six.

† The *Judiciary Act* 1903 provided for the payment of a salary of £3,500 (\$7,000) a year to the Chief Justice and of £3,000 (\$6,000) a year to each other Justice. These amounts have been varied from time to time.

75. In all matters—

- (i) Arising under any treaty:
- (ii) Affecting consuls or other representatives of other countries:
- (iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party:
- (iv) Between States, or between residents of different States, or between a State and a resident of another State:
- (v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth:

the High Court shall have original jurisdiction.

76. The Parliament may make laws conferring original jurisdiction on the High Court in any matter—

- (i) Arising under this Constitution, or involving its interpretation:
- (ii) Arising under any laws made by the Parliament:
- (iii) Of Admiralty and maritime jurisdiction:
- (iv) Relating to the same subject-matter claimed under the laws of different States.

77. With respect to any of the matters mentioned in the last two sections the Parliament may make laws—

- (i) Defining the jurisdiction of any federal court other than the High Court:
- (ii) Defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States:
- (iii) Investing any court of a State with federal jurisdiction.

78. The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.

79. The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.

80. The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

#### CHAPTER IV.—FINANCE AND TRADE.

81. All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.

82. The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon; and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.

83. No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

84. When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State, be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth; but the State shall pay to the Commonwealth a part thereof



to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if he had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.

85. When any department of the public service of a State is transferred to the Commonwealth—

- (i) All property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth; but, in the case of the departments controlling customs and excise and bounties, for such time only as the Governor-General in Council may declare to be necessary:
- (ii) The Commonwealth may acquire any property of the State, of any kind used, but not exclusively used in connexion with the department; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the State in force at the establishment of the Commonwealth:
- (iii) The Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section; if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament:
- (iv) The Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.

86. On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.

87. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

88. Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.

89. Until the imposition of uniform duties of customs—

- (i) The Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.
- (ii) The Commonwealth shall debit to each State—
  - (a) The expenditure therein of the Commonwealth incurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth;
  - (b) The proportion of the State, according to the number of its people, in the other expenditure of the Commonwealth.
- (iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.

90. On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

91. Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid to or bounty on the production or export of goods.

92. On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which, whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two years after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

93. During the first five years after the imposition of uniform duties of customs, and thereafter until the Parliament otherwise provides—

- (i) The duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State:
- (ii) Subject to the last sub-section, the Commonwealth shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

94. After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair, for the monthly payment to the several States of all surplus revenue of the Commonwealth.

95. Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an Original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported from beyond the limits of the Commonwealth; and such duties shall be collected by the Commonwealth.

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three-fifths, two-fifths and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

96. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

97. Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned whenever the Colony, or the Government or an officer of the Colony, is mentioned.

98. The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

99. The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.

100. The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

101. There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.

102. The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under a State, if such preference or discrimination is undue and unreasonable, or unjust to any State; due regard

being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

103. The members of the Inter-State Commission—

- (i) Shall be appointed by the Governor-General in Council:
- (ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity:
- (iii) Shall receive such remuneration as the Parliament may fix; but such remuneration shall not be diminished during their continuance in office.

104. Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State, and if the rate applies equally to goods within the State and to goods passing into the State from other States.

105. The Parliament may take over from the States their public debts [as existing at the establishment of the Commonwealth],\* or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof; and the States shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.

105A.† (1.) *The Commonwealth may make agreements with the States with respect to the public debts of the States, including—*

- (a) *the taking over of such debts by the Commonwealth;*
- (b) *the management of such debts;*
- (c) *the payment of interest and the provision and management of sinking funds in respect of such debts;*
- (d) *the consolidation, renewal, conversion, and redemption of such debts;*
- (e) *the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth; and*
- (f) *the borrowing of money by the States or by the Commonwealth, or by the Commonwealth for the States.*

(2.) *The Parliament may make laws for validating any such agreement made before the commencement of this section.*

(3.) *The Parliament may make laws for the carrying out by the parties thereto of any such agreement.*

(4.) *Any such agreement may be varied or rescinded by the parties thereto.*

(5.) *Every such agreement and any such variation thereof shall be binding upon the Commonwealth and the States parties thereto notwithstanding anything contained in this Constitution or the Constitution of the several States or in any law of the Parliament of the Commonwealth or of any State.*

(6.) *The powers conferred by this section shall not be construed as being limited in any way by the provisions of section one hundred and five of this Constitution.*

## CHAPTER V.—THE STATES.

106. The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.

107. Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be.

\* Under Section 2 of the *Constitution Alteration (State Debts)* 1909, the words in square brackets were omitted.

† Under Section 2 of the *Constitution Alteration (State Debts)* 1928, the Constitution was amended by the insertion of this section.



108. Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State; and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.

109. When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

110. The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.

111. The Parliament of a State may surrender any part of the State to the Commonwealth; and upon such surrender, and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.

112. After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the net produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth.

113. All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.

114. A State shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.

115. A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.

116. The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.

117. A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.

118. Full faith and credit shall be given, throughout the Commonwealth, to the laws, the public Acts and records, and the judicial proceedings of every State.

119. The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.

120. Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.

## CHAPTER VI.—NEW STATES.

121. The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.

122. The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.

123. The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

124. A new State may be formed by separation of territory from a State, but only with the consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the Parliaments of the States affected.

## CHAPTER VII.—MISCELLANEOUS.

125. The seat of Government of the Commonwealth shall be determined by the Parliament and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.

Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the Seat of Government.

126. The Queen may authorize the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen; but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

\*[127. In reckoning the numbers of the people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted.]

## CHAPTER VIII.—ALTERATION OF THE CONSTITUTION.

128. This Constitution shall not be altered except in the following manner:—

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

## SCHEDULE.

## OATH.

I, A.B., do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. SO HELP ME GOD!

## AFFIRMATION.

I, A.B., do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law.

(NOTE.—*The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.*)

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\* Under Section 3 of the *Constitution Alteration (Aboriginals) 1967* the section in square brackets was repealed.

### The Royal Proclamation

The preceding Act received the Royal assent on 9 July 1900. This made it lawful to declare that the people of Australia should be united in a Federal Commonwealth. This proclamation, made on 17 September 1900, constituted the Commonwealth as from 1 January 1901; it read as follows.

BY THE QUEEN.

A PROCLAMATION.

(Signed) VICTORIA R.

WHEREAS by an Act of Parliament passed in the Sixty-third and Sixty-fourth Years of Our Reign, intitled "An Act to constitute the Commonwealth of *Australia*," it is enacted that it shall be lawful for the Queen, with the advice of the Privy Council, to declare by Proclamation, that, on and after a day therein appointed, not being later than One year after the passing of this Act, the people of *New South Wales, Victoria, South Australia, Queensland and Tasmania*, and also, if Her Majesty is satisfied that the people of *Western Australia* have agreed thereto, of *Western Australia*, shall be united in a Federal Commonwealth under the name of the Commonwealth of *Australia*.

And whereas We are satisfied that the people of *Western Australia* have agreed thereto accordingly.

We therefore, by and with the advice of Our Privy Council, have thought fit to issue this Our Royal Proclamation, and We do hereby declare that on and after the First day of *January* One thousand nine hundred and one, the people of *New South Wales, Victoria, South Australia, Queensland, Tasmania, and Western Australia* shall be united in a Federal Commonwealth under the name of the Commonwealth of *Australia*.

Given at Our Court at *Balmoral* this Seventeenth day of *September*, in the Year of Our Lord One thousand nine hundred, and in the Sixty-fourth Year of Our Reign.

GOD SAVE THE QUEEN.

### The External Territories of Australia\*

#### Norfolk Island

In 1856 Norfolk Island was created a distinct and separate settlement under the jurisdiction of New South Wales. Later, in 1896, it was made a dependency under the Governor of that colony, and finally by the passage of the *Norfolk Island Act* 1913 it was accepted as a Territory of the Commonwealth of Australia. The island is situated in latitude 29° 3' 3" S., longitude 167° 57' 5" E., and comprises an area of approximately 14 square miles.

#### Papua

Under the administration of the Commonwealth, but not included in it, is British New Guinea or Papua, finally annexed by the British Government in 1884. This Territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on 1 September 1906, under the authority of the *Papua Act* 1905. The area of Papua is about 86,100 square miles.

#### Trust Territory of New Guinea

In 1919 it was agreed by the Principal Allied and Associated Powers that a mandate should be conferred on Australia for the government of the former German territories and islands situated in latitude between the Equator and 8° S., and in longitude between 141° E. and 159° 25' E. The mandate was issued by the League of Nations on 17 December 1920. The Governor-General of the Commonwealth was authorised to accept the mandate by the *New Guinea Act* 1920, which also declared the area to be a Territory under the authority of the Commonwealth by the name of the Territory of New Guinea. The land area comprises about 92,160 square miles, and the administration under the mandate dated from 9 May 1921. New Guinea is now administered under a Trusteeship Agreement with the United Nations, approved on 13 December 1946.

#### Australian Antarctic Territory

An Imperial Order in Council of 7 February 1933 placed under Australian authority 'all the islands and territories other than Adelie Land which are situated south of the 60th degree of South Latitude and lying between the 160th degree of East Longitude and the 45th degree of East Longitude'.

\* Until 31 January 1968 included the former Trust Territory of Nauru, which became independent as the Republic of Nauru on that date. For further information on Nauru see Year Book No. 54, pages 22-3 and 1174, and earlier issues.



The Order came into force with a proclamation issued by the Governor-General on 24 August 1936, after the passing of the *Australian Antarctic Territory Acceptance Act* 1933 by the Commonwealth Parliament. The boundaries of Adelie Land were definitely fixed by a French Decree of 1 April 1938 as latitude 60° S., longitude 136° E., and longitude 142° E.

#### **Heard and McDonald Islands**

Heard and McDonald Islands, about 2,500 miles south-west of Fremantle, were transferred from United Kingdom to Australian control as from 26 December 1947. Heard Island is approximately 27 miles long and 13 miles wide, and McDonald Islands, about 26 miles to the west of Heard Island, are small, rocky and precipitous.

#### **Cocos [Keeling] Islands**

*The Cocos (Keeling) Islands Act* 1955 provided for the acceptance of the Cocos Islands, in the Indian Ocean, as a Territory under the authority of the Commonwealth of Australia and was parallel to an Act of the United Kingdom Parliament transferring authority over the islands to the Commonwealth. Consequent on the passing of these Acts, Her Majesty, by Order in Council, specified 23 November 1955 as the date of transfer. From that date the islands came under Australian administration and an Official Representative of Australia was appointed to take charge of the local administration of the islands. Their area is about 5½ square miles, and they are situated in the Indian Ocean in latitude 12° 5' S. and longitude 96° 53' E.

#### **Christmas Island**

*The Christmas Island Act* 1958 provided for the acceptance of Christmas Island, in the Indian Ocean, as a Territory under the authority of the Commonwealth of Australia. Complementary legislation having been passed by the Parliament of the United Kingdom, the island was transferred to the Australian administration on 1 October 1958, and an Official Representative was appointed to administer the Territory. The area of the island is about 52 square miles and it is situated in the Indian Ocean in latitude 10° 25' 22" S. and longitude 105° 39' 59" E.



## CHAPTER 2

# PHYSICAL GEOGRAPHY AND CLIMATE

### General description of Australia

#### Geographical position

The Australian Commonwealth, which includes the island continent of Australia and the island of Tasmania, is situated in the Southern Hemisphere, and comprises an area of 2,967,909 square miles, the mainland alone containing 2,941,526 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes 113° 9' E. and 153° 39' E., while its northern and southern limits are the parallels of latitude 10° 41' S. and 43° 39' S., or, excluding Tasmania, 39° 8' S. On its north are the Timor and Arafura Seas and Torres Strait, on its south the Southern Ocean\*. The extreme points are Steep Point on the West, Cape Byron on the east, Cape York on the north, and South-East Cape or, if Tasmania be excluded, Wilson's Promontory, on the south. The difference in latitude between Cape York and Wilson's Promontory is 1,959 miles, and in longitude between Steep Point and Cape Byron 2,489 miles.

#### Tropical and temperate regions

Of the total area of Australia, nearly 39 per cent lies within the tropics. Taking the latitude of the Tropic of Capricorn as 23° 30' S., the areas within the tropical and temperate zones are approximately as follows.

#### AREAS OF TROPICAL AND TEMPERATE REGIONS: STATES AND TERRITORIES

(Square miles)

<i>Area</i>	<i>N.S.W. (a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Total</i>
Within tropical zone .	..	..	360,642	..	364,000	..	422,980	1,147,622
" temperate zone	310,372	87,884	306,358	380,070	611,920	26,383	97,300	1,820,287
Total area .	310,372	87,884	667,000	380,070	975,920	26,383	520,280	2,967,909

(a) Includes Australian Capital Territory (939 square miles).

Fifty-four per cent of Queensland lies within the tropical zone and 46 per cent in the temperate zone; 37 per cent of Western Australia is tropical and 63 per cent temperate; while 81 per cent of the Northern Territory is tropical and 19 per cent temperate. All the remaining States lie within the temperate zone.

#### Area of Australia compared with areas of other countries

The area of Australia is almost as great as that of the United States of America excluding Alaska, four-fifths of that of Canada, more than half as large again as Europe excluding the U.S.S.R., and about twenty-five times that of Great Britain and Ireland. The areas of Australia and of certain other countries are shown in the table on the following page. The areas shown are in the main obtained from the *Statistical Yearbook* 1969, published by the Statistical Office of the United Nations, and the countries have been arranged in accordance with the continental groups used therein.

\* The Southern Ocean is a local designation for the part of the Indian Ocean lying between the southern shores of Australia and Antarctica.



AREA OF AUSTRALIA AND OF OTHER COUNTRIES, *circa* 1968

('000 square miles)

Country	Area	Country	Area
Continental divisions—		Africa— <i>continued</i>	
Europe(a)	1,903	Niger	489
Asia(a)	10,629	Angola	481
U.S.S.R. (Europe and Asia)	8,649	Ethiopia	472
Africa	11,704	South Africa, Republic of	471
North and Central America and West Indies	9,362	Mali	479
South America	6,889	Mauritania	398
Oceania	3,286	United Arab Republic	386
		Tanzania, United Republic of	363
		Nigeria	357
		Namibia	318
		Mozambique	302
		Zambia	291
		Somalia	246
		Central African Republic	241
		Madagascar	227
		Kenya	225
		Other	1,990
		<i>Total, Africa</i>	<i>11,704</i>
		North and Central America—	
		Canada	3,852
		United States of America(b)	3,615
		Greenland	840
		Mexico	762
		Nicaragua	50
		Cuba	44
		Honduras	43
		Other	155
		<i>Total, North and Central America</i>	<i>9,362</i>
		South America—	
		Brazil	3,286
		Argentina	1,072
		Peru	496
		Colombia (excluding Panama)	440
		Bolivia	424
		Venezuela	352
		Chile	292
		Paraguay	157
		Ecuador	109
		Other	260
		<i>Total, South America</i>	<i>6,889</i>
		Oceania—	
		Australia	2,968
		New Zealand	104
		New Guinea(c)	92
		Papua	86
		Other	36
		<i>Total, Oceania</i>	<i>3,286</i>
		Total, World, excluding Arctic and Antarctic regions	
	52,420		
Europe(a)—		Asia(a)—	
France	211	China (mainland)	3,692
Spain (including possessions)	195	India	1,176
Sweden	174	Saudi Arabia	830
Finland	130	Iran	636
Norway	125	Mongolia	604
Poland	121	Indonesia	576
Italy	116	Pakistan	366
Yugoslavia	99	Trucial Oman	301
Germany, Federal Republic of	96	Turkey	301
United Kingdom	94	Burma	262
Romania	92	Afghanistan	250
Other	451	Thailand	198
		Iraq	168
		Other	1,269
		<i>Total, Asia(a)</i>	<i>10,629</i>
		U.S.S.R.—	
		<i>Total, U.S.S.R.</i>	<i>8,649</i>
		Africa—	
		Sudan	967
		Algeria	920
		Congo, Democratic Republic of	906
		Libya	679
		Chad	496

(a) Excludes U.S.S.R., shown below. (West Irian) is included in Other Asia.

(b) Includes Hawaii.

(c) Australian Trust Territory. Western New Guinea

## AREAS OF STATES AND TERRITORIES, AND STANDARD TIMES

State or Territory	Area	Percentage of total area	Standard times	
			Meridian selected	Ahead of G.M.T.
	sq miles			hours
New South Wales . . . . .	309,433	10.43	150° E.	10
Victoria . . . . .	87,884	2.96	150° E.	10
Queensland . . . . .	667,000	22.47	150° E.	10
South Australia . . . . .	380,070	12.81	142°30' E.	9½
Western Australia . . . . .	975,920	32.88	120° E.	8
Northern Territory . . . . .	520,280	17.53	142°30' E.	9½
Australian Capital Territory . . . . .	939	0.03	150° E.	10
<i>Mainland</i> . . . . .	<i>2,941,526</i>	<i>99.11</i>	<i>..</i>	<i>..</i>
Tasmania . . . . .	26,383	0.89	150° E.	10
<i>Australia</i> . . . . .	<i>2,967,909</i>	<i>100.00</i>	<i>..</i>	<i>..</i>

The coastline of Australia is approximately 12,000 miles long—New South Wales, 700 miles; Victoria, 700 miles; Queensland, 3,200 miles; South Australia, 1,500 miles; Western Australia, 4,000 miles; Northern Territory, 1,000 miles; Australian Capital Territory, Jervis Bay area included in New South Wales; Tasmania, 900 miles. These measurements are broadly on a 'direct' basis, but even so they must be regarded as approximate only.

## Geographical features of Australia

The following description is a broad summary of the main physical characteristics of the Australian continent.

A section through the Australian continent from east to west, at the point of its greatest breadth, shows first a narrow belt of coastal plain. This plain, extending north and south along the whole east coast, is well watered by rivers. It is of variable width, seldom more than sixty or seventy miles, and occasionally only a few miles, the average being roughly about forty to fifty miles. Bordering this plain is the Great Dividing Range, which extends from the north of Queensland to the south of New South Wales, and thence one branch sweeps westwards towards the boundary of Victoria and South Australia, and the other, the main branch, terminates in Tasmania. This range, which rises, often abruptly, from the plain, frequently presents bold escarpments on its eastern face, but the descent on its western slopes is gradual, until, in the country to the north of Spencer's Gulf, the plain is not above sea-level and occasionally even below it. Thence there is another almost imperceptible rise until the mountain ranges of Western Australia are reached, and beyond these lies another coastal plain. The mountains of Australia are relatively low, the highest peak, Mount Kosciusko, in New South Wales, being only about 7,300 feet. Three-quarters of the land-mass of Australia lies between the 600 and 1,500 feet contours in the form of a huge plateau, constituting the most distinctive feature of the Australian continent, to which the peculiarities of Australia's climate can probably be largely ascribed.

The rivers of Australia may be divided into two major classes, those of the coastal plains with moderate rates of fall and those of the central plains with very slight fall. Of the former not many are navigable for any distance from their mouths, and bars make many of them difficult of access or inaccessible from the sea.

The longest two rivers of the northern part of the east coast are the Burdekin and the Fitzroy in Queensland. The Hunter is the largest coastal river of New South Wales, and the Murray River, with its great tributary the Darling, drains part of Queensland, the major part of New South Wales, and a large part of Victoria, finally flowing into the arm of the sea known as Lake Alexandrina, on the eastern side of the South Australian coast. The total length of the Murray is about 1,600 miles, 400 being in South Australia and 1,200 constituting the boundary between New South Wales and Victoria. The total length of the Murray-Darling from the source of the Darling to the mouth of the Murray is about 2,300 miles. The rivers of the north-west coast of Australia (Western Australia), e.g. the Murchison, Gascoyne, Ashburton, Fortesque, De Grey, Fitzroy, Drysdale, and Ord are of considerable size. So also are those in the Northern Territory, e.g. the Victoria and Daly, and those

on the Queensland side of the Gulf of Carpentaria, such as the Gregory, Leichhardt, Cloncurry, Gilbert, and Mitchell. The rivers of Tasmania have short and rapid courses, as might be expected from the configuration of the country.

The 'lakes' of Australia may be divided into three classes: true permanent lakes; lakes which, being very shallow, become mere morasses in dry seasons or even dry up, and finally present a cracked surface of salt and dry mud; and lakes which are really inlets of the ocean, opening out into a lake-like expanse. The second class is the only one which seems to demand special mention. These are a characteristic of the great central plain of Australia. Some of them, such as Lakes Torrens, Gairdner, Eyre, and Frome, are of considerable extent.

For further information on the geographical features of Australia earlier issues of the Year Book should be consulted. The list of special articles, etc., at the end of this volume indicates the nature of the information available and its position in the various issues.

## Weather and climate of Australia

This section has been prepared by the Director of the Commonwealth Bureau of Meteorology, and the various States and Territories have been arranged in the standard order adopted by that Bureau. The section concludes with a brief summary of the weather of 1970.

### Introduction

Australia extends from about latitude 10° S. to latitude 44° S., but owing largely to the moderating effects of the surrounding oceans and the absence of very pronounced and extensive mountain masses it is less subject to extremes of climate than are regions of similar size in other parts of the world. The average elevation of the land surface is low—probably close to 900 feet above the sea; while the maximum altitude is just above 7,300 feet. Latitude for latitude the Australian climate is generally more temperate than that of the other large land masses of the earth, although it varies considerably from the tropical to the alpine.

The Australian meteorological seasons are: Summer—December, January, February; Autumn—March, April, May; Winter—June, July, August; Spring—September, October, November.

The following general discussion of the climate of Australia is necessarily brief. However, extensive records of Australian climatic data are held and published in various forms by the Bureau of Meteorology. A programme of regional climatic survey has been in progress for some years, and a large number of studies have been published by the Bureau of Meteorology, by the Department of National Development, and by State Development Authorities. The Bureau of Meteorology welcomes inquiries for climatic information, which may be made at its Central Office in Melbourne or through the Regional Offices which are situated in each of the State capital cities and in Canberra and Darwin. Reference may also be made to various bulletins and research papers mentioned in this text for more detailed information on particular topics.

### Precipitation

Precipitation of moisture from the atmosphere may take various forms depending chiefly on the thermal conditions existing at the time. Within the Australian region precipitation occurs chiefly as rain because of the generally mild temperatures, but may also occur as snow or hail. Broadly, the immediate physical cause of rainfall may be said to be the lifting of moist air with resultant cooling, condensation into cloud, and eventual precipitation of the heavy water droplets as rain. This process may be achieved by three different means each of which may be combined with either or both of the others:

- (a) Orographic lifting caused by winds blowing onto rising terrain;
- (b) convectional lifting resulting in the development of individual rain clouds of the cumulus or cumulonimbus type producing showers and thunderstorms;
- (c) lifting of a warm air mass as it rises over cooler air—known as a 'frontal' process.

*Annual rainfall.* The distributions of the average annual and median annual rainfall over Australia are shown in plates 2 and 3, pages 30–1, while plate 4, page 32, shows the distribution in 1970. The median is the value equalled or exceeded by half of the occurrences, and usually gives a better indication of the rainfall most frequently occurring.

While Australia is a continent of comparatively low relief, the orographic processes in rain production are very marked in the chain of the Great Dividing Range bordering the whole east coast of the continent, in the ranges of the south-western corner of Western Australia, and in Tasmania. Thus on the east coast the higher rainfall areas lie between the ranges and the Pacific Ocean in the region of prevailing south-east wind circulation. In Tasmania and the south-west of Western Australia the region of high rainfall lies between the ranges and the ocean to the west, these areas lying in a region of predominantly westerly wind flow.



The north-western part of the continent and to some extent the whole region of the Northern Territory and inland north Queensland comes under the influence of the Australian-Asian monsoon. This results in high rainfalls in a summer wet season with the inflow of moist air from the north-west, and a winter dry season with predominantly south-east winds blowing across the dry regions of the interior and producing little rainfall. Tropical cyclones affect the waters adjacent to the north-east and north-west of Australia between December and April. Their frequency varies greatly from season to season, but on the average about three of these disturbances occur in the Coral Sea each season and about two in the eastern Indian Ocean adjacent to the west coast of the continent. When tropical cyclones move close to the tropical coast of the continent they cause very heavy rainfalls over the coastal regions. On occasions these cyclones move over the land and lose intensity, but many still continue to be accompanied by heavy rainfall along their path.

Southern Australia lies in the region of the mid-latitude westerlies for the winter half of the year and is subject to the rain-producing influences of the great depressions of the Southern Ocean and their associated frontal systems. The combined effects of these systems and the topography lead to high winter rainfalls in south-western and south-eastern Australia and in Tasmania, with the highest falls occurring on the windward side of the mountains. The rainfall generally decreases inland with distance from the coast, although the 10-inch isohyet reaches the shore of the Great Australian Bight and the central western coast of Western Australia in regions which are of very flat relief and which, because of their position and the orientation of the coastline, are only rarely exposed to moist winds.

**AREA DISTRIBUTION OF AVERAGE ANNUAL RAINFALL: STATES AND TERRITORIES**  
(Per cent)

<i>Average annual rainfall</i>	<i>W.A.</i>	<i>N.T.</i>	<i>S.A.</i>	<i>Qld</i>	<i>N.S.W.</i> (a)	<i>Vic.</i>	<i>Tas.</i>	<i>Total</i>
Under 10 inches	58.0	24.7	82.8	13.0	19.7	Nil	Nil	39.0
10 and under 15 inches	22.4	32.4	9.4	14.4	23.5	22.4	Nil	20.6
15 " " 20 "	6.8	9.7	4.5	19.7	17.5	15.2	0.7	11.2
20 " " 25 "	3.7	6.6	2.2	18.8	14.2	17.9	11.0	9.0
25 " " 30 "	3.7	9.3	0.8	11.6	9.1	18.0	11.4	7.2
30 " " 40 "	3.3	4.7	0.3	11.1	9.9	16.1	20.4	6.1
40 inches and over	2.1	12.6	Nil	11.4	6.1	10.4	56.5	6.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Includes Australian Capital Territory.

The region with the highest average annual rainfall is the east coast of Queensland between Port Douglas and Cardwell, where Tully has an annual average of 177 inches. A further very high rainfall region is the mountainous west coast of Tasmania, where Lake Margaret has the highest average annual total of 145 inches. The area of lowest average annual rainfall is that of some 180,000 square miles surrounding Lake Eyre in South Australia, where on the average only 4 to 6 inches are received annually. The lowest average over a long period of record is at Troudaninna—4.13 inches. Rain occurs very irregularly, averaging only about one or two days a month in this region.

Of all the continents (excluding Antarctica), Australia receives the least average depth of rainfall and has the least run-off from its rivers into the oceans. Only in relatively small areas of the continent could the rainfall be described as abundant.

*Seasonal distribution of rainfall.* The average monthly distribution of rainfall in the various Australian rainfall districts is shown by the histograms of plate 5, page 33.

The following are the most marked features.

- (a) The clearly defined wet summer and dry winter of the monsoon region of northern Australia.
- (b) The more regular distribution of rainfall throughout the year in south-eastern Australia. In the region to the south and west of the Great Dividing Range a less pronounced maximum of rainfall is noticeable in the winter or early spring. On the Gippsland (eastern Victoria) coast the rainfall is fairly evenly distributed throughout the year, but further along the east coast of the continent the rainfall minimum in late winter and early spring begins to appear and becomes more marked as the tropical regions are approached.
- (c) The marked rainfall maximum in the south-western districts of Western Australia in winter—the period of the most active southern depressions and frontal systems in this region.



PLATE 2

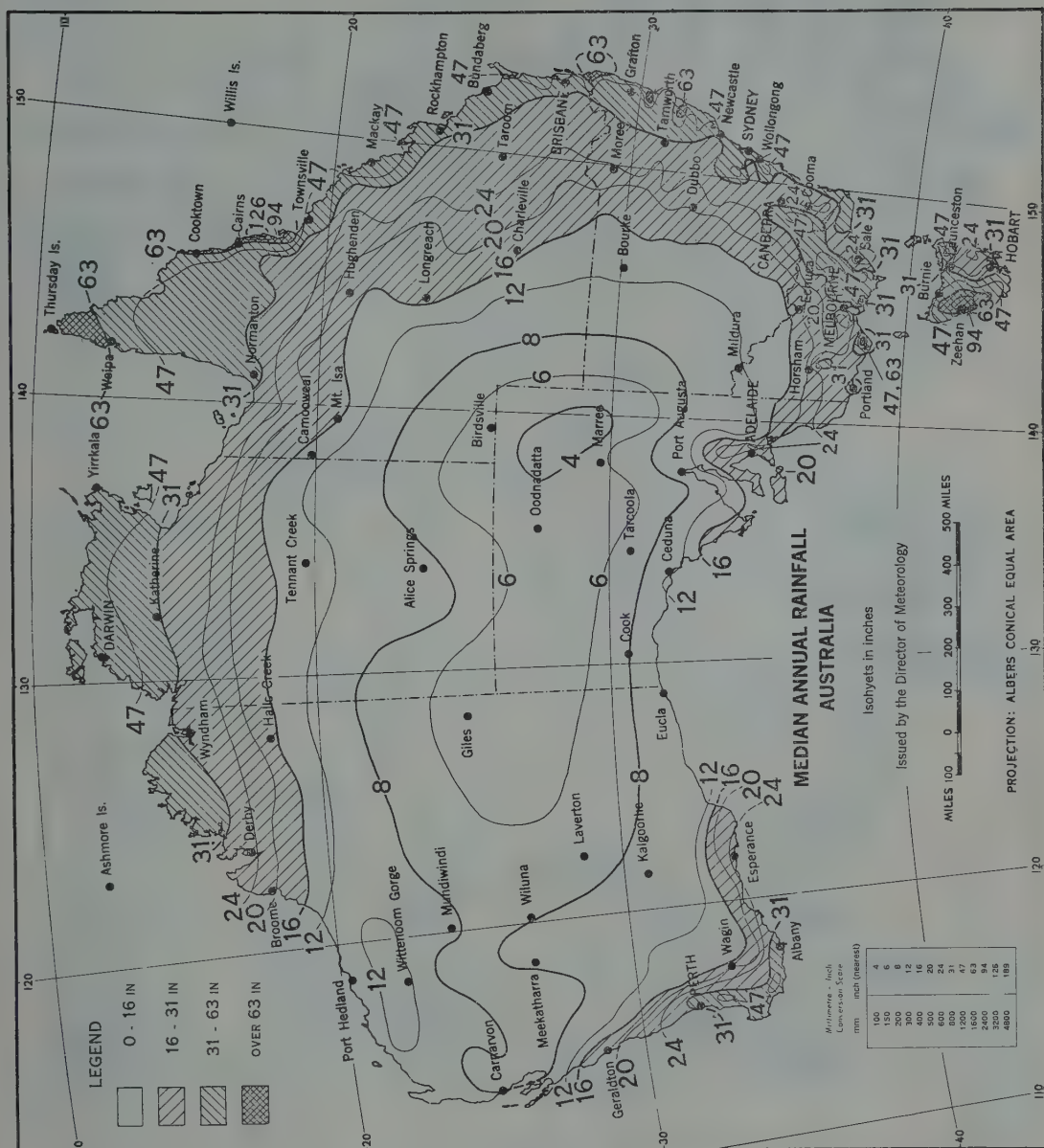


PLATE 3



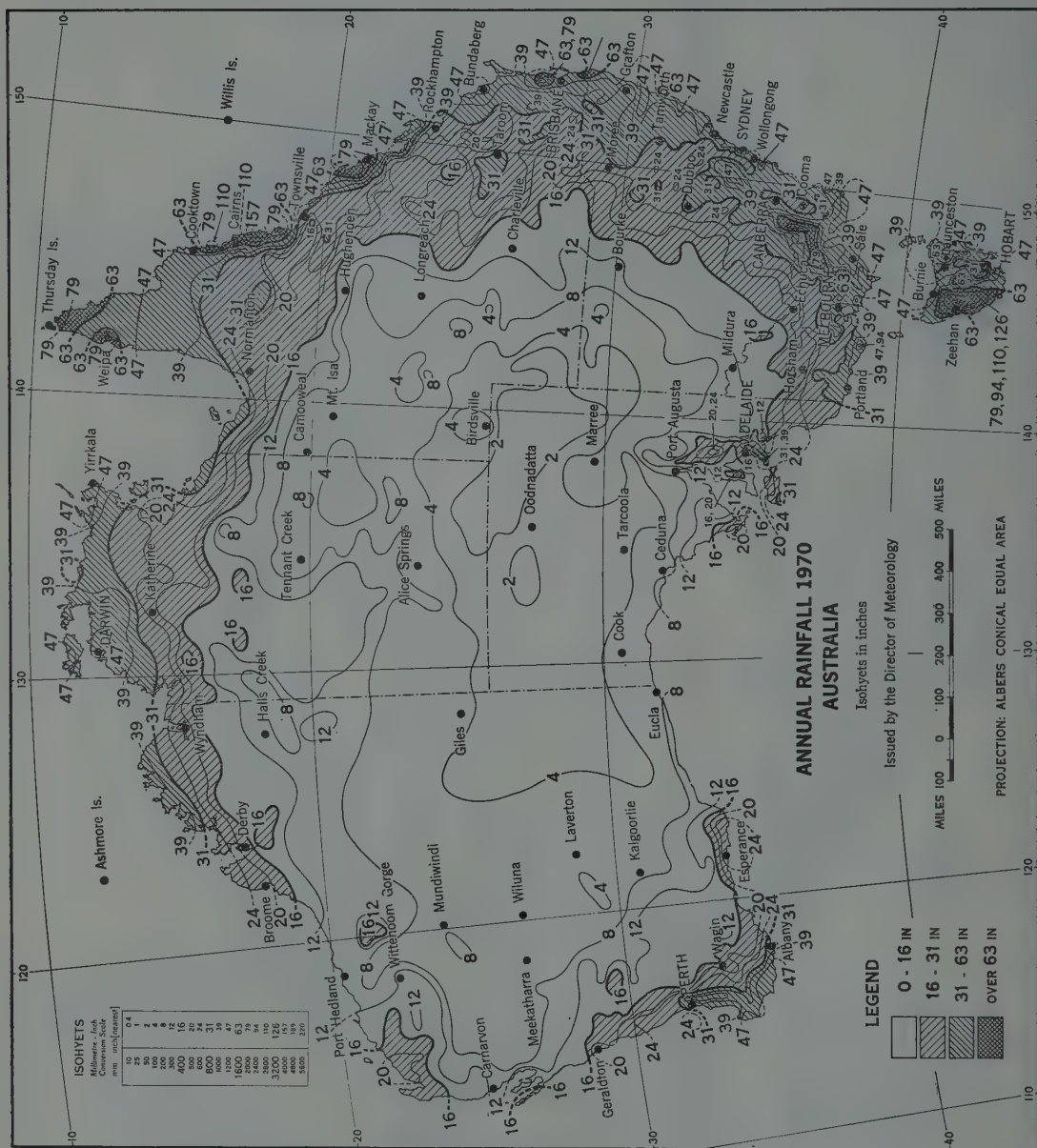


PLATE 4

# REFERENCE TO DISTRICTS

## WESTERN AUSTRALIA

- 1 North Kimberley
- 2 East Kimberley
- 3 South Kimberley
- 4 De Grey
- 5 Fitzroy
- 6 West Gascoyne
- 7 East Gascoyne
- 8 South Coast
- 9 Central Coast
- 10 North Coast
- 11 South Coast
- 12 South West
- 13 North West

## NORTHERN TERRITORY

- 14 Northern River
- 15 Northern Plateau

## SOUTH AUSTRALIA

- 16 Northwest
- 17 Far North
- 18 Western Agricultural
- 19 Central Agricultural
- 20 Northern Plains
- 21 Lower North
- 22 West Central
- 23 East Central
- 24 Murray Valley
- 25 A. Murray Valley
- 26 Upper Southeast
- 27 Lower Southeast

## QUEENSLAND

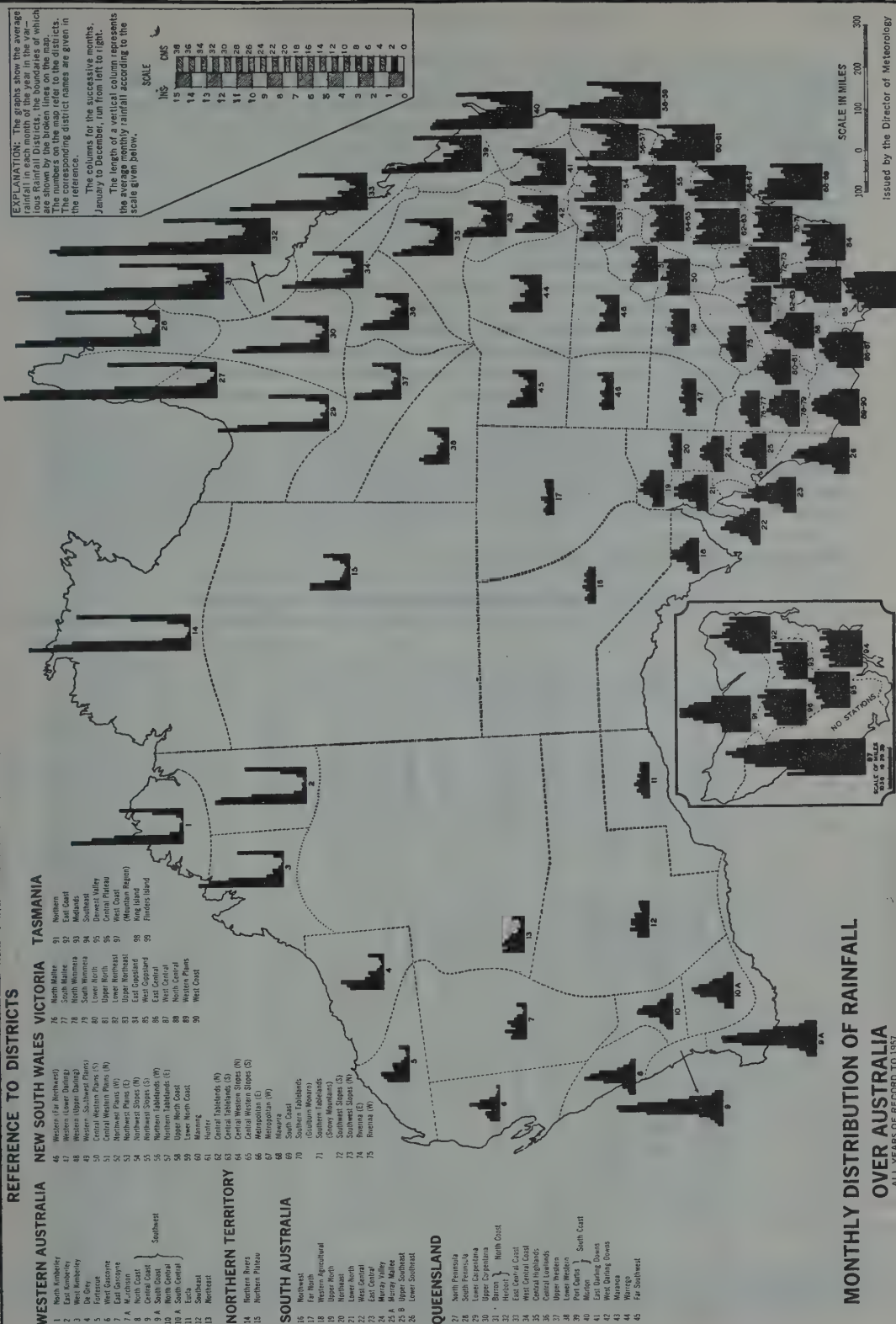
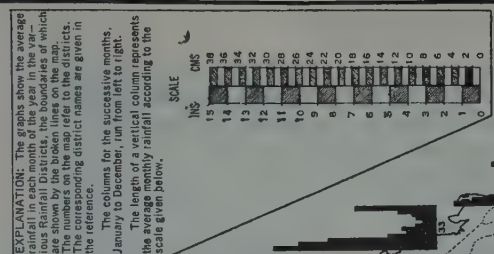
- 28 South Peninsula
- 29 North Peninsula
- 30 Lower Capricornia
- 31 Upper Capricornia
- 32 Burnett
- 33 North Coast
- 34 East Central Coast
- 35 West Central Coast
- 36 Central Highlands
- 37 Upper Queensland
- 38 Lower Queensland
- 39 Port Curtis
- 40 South Coast
- 41 Darling Downs
- 42 West Darling Downs
- 43 Maranoa
- 44 Darling
- 45 Far Southwest

## TASMANIA

- 51 Northern
- 52 North Mallee
- 53 South Mallee
- 54 South West
- 55 South Western
- 56 Lower North
- 57 Upper North
- 58 Central Plateau
- 59 Upper Northeast
- 60 Lower Northeast
- 61 East Coastland
- 62 King Island
- 63 Fines Island

## VICTORIA

- 64 Northern
- 65 North Mallee
- 66 South Mallee
- 67 South West
- 68 South Western
- 69 Lower North
- 70 Upper North
- 71 Central Plateau
- 72 Upper Northeast
- 73 Lower Northeast
- 74 East Coastland
- 75 King Island
- 76 Fines Island



# MONTHLY DISTRIBUTION OF RAINFALL OVER AUSTRALIA

ALL YEARS OF RECORD TO 1957

Issued by the Director of Meteorology

For further information on monthly rainfalls reference may be made to the various Australian rainfall bulletins, to the Climatological Surveys of particular districts, and to the annual rain maps and books of normals (standard 30 year periods), all published by the Bureau of Meteorology.

*Variability of rainfall.* For most agricultural pursuits a more important criterion of the value of rainfall is its variability or reliability. The adequate description of rainfall variability over an extensive geographical area is a matter of some difficulty. Probably the best available measures are to be found in the tables which have been calculated for a number of individual stations in some of the Climatological Survey districts. These tables show the percentage chances of receiving specified amounts of rainfall in monthly seasonal or annual time spans. Statistical indexes of rainfall variation based on a number of different techniques have been used to produce maps which show the main features of the variability of annual rainfall over Australia.

In general it may be stated that the regions of most reliable rainfall are the south-west of Western Australia, western Tasmania, and western and southern Victoria south of the divide. These areas have one of the most reliable rainfalls in the world. Elsewhere in Australia the degree of variability, in general, increases inland, but the region of the highest variability for low average annual rainfalls extends across the central part of the continent from south-western Queensland to the central coast of Western Australia. Some outstanding examples of the numerous instances of high rainfall variability throughout Australia are given below.

At Onslow (Western Australia) annual totals vary from 0.05 inches to 28 inches, and in the four consecutive years 1921 to 1924 the annual totals were 22.25, 2.71, 26.82, and 2.18 inches respectively. At Whim Creek, where 29.41 inches have been recorded in a single day, only 17 points (0.17 inches) were received in the whole of 1924. Great variability can also occur in the heavy rainfall areas, e.g. at Tully the annual rainfalls have varied from 310.92 inches in 1950 to 104.98 inches in 1943.

The following table of annual rainfall for the Australian capital cities for the past thirty years indicates the variation in rainfall at these sites.

RAINFALL: AUSTRALIAN CAPITAL CITIES, 1940 TO 1969

Year	Perth		Adelaide		Brisbane		Sydney		Canberra(a)		Melbourne		Hobart(b)	
	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days	Amount	No. of days
1940	20.00	98	16.16	116	42.37	93	39.34	125	14.65	67	19.83	126	17.17	135
1941	34.74	122	22.56	126	31.50	105	26.74	129	21.33	93	31.78	157	23.49	145
1942	39.24	140	25.44	133	44.01	125	48.29	121	25.18	108	29.79	148	19.42	163
1943	31.46	117	17.84	135	50.68	126	50.74	136	22.82	141	18.80	150	20.84	149
1944	27.39	123	17.13	114	27.85	100	31.04	115	11.96	82	21.32	143	26.23	151
1945	52.67	137	17.85	105	48.16	130	46.47	136	23.76	92	19.22	152	16.92	157
1946	41.47	122	22.59	135	38.66	83	36.05	111	20.53	102	29.80	177	39.45	193
1947	43.42	137	21.89	146	60.30	146	41.45	137	26.30	121	30.47	163	38.61	181
1948	34.75	126	21.40	122	41.54	106	38.83	131	31.49	104	20.98	155	23.42	178
1949	27.15	126	18.23	119	47.18	121	66.26	149	25.42	115	31.41	163	22.85	157
1950	32.27	122	16.06	91	63.93	152	86.63	183	41.79	124	26.18	147	19.25	131
1951	34.14	127	25.44	135	33.89	87	53.15	143	18.97	95	29.85	155	24.57	163
1952	39.28	123	19.99	128	33.49	122	59.19	130	37.98	143	34.39	177	30.35	165
1953	37.14	119	20.00	121	43.60	101	40.86	110	19.42	110	28.38	148	28.06	162
1954	28.05	112	16.73	109	61.36	142	41.29	134	18.00	80	33.53	139	27.20	143
1955	46.52	138	24.58	134	50.41	136	72.46	160	28.92	128	30.70	160	22.32	168
1956	37.35	107	27.24	154	59.18	120	67.33	155	34.90	159	30.96	188	36.63	175
1957	33.40	117	16.71	110	20.58	80	27.13	110	13.39	78	20.68	146	28.66	129
1958	32.08	107	17.57	121	46.61	115	59.19	144	23.51	106	26.98	155	36.55	166
1959	24.23	114	11.32	88	45.84	146	59.67	164	35.07	106	25.84	131	19.28	136
1960	28.21	112	23.07	129	27.51	103	51.01	152	31.98	128	33.50	162	29.35	140
1961	32.27	133	14.91	122	42.36	134	57.08	161	30.42	109	22.05	129	18.03	156
1962	28.75	123	17.96	125	41.39	131	44.90	137	25.71	122	23.06	140	25.40	161
1963	39.14	140	24.43	118	49.09	134	80.11	169	24.32	126	29.04	149	15.51	129
1964	38.40	127	21.89	135	48.18	112	43.30	99	25.29	106	27.80	166	28.06	169
1965	40.98	128	13.34	111	41.02	113	36.01	118	15.72	87	23.24	122	20.98	158
1966	30.45	116	19.49	123	43.80	111	48.40	130	27.22	117	26.81	156	27.52	145
1967	41.26	104	10.11	89	70.80	137	52.78	141	13.84	72	13.06	106	19.23	130
1968	36.63	136	25.72	141	33.50	93	24.56	113	20.26	103	20.96	141	18.64	152
1969	22.59	87	20.68	112	41.15	115	56.94	140	29.83	121	24.60	137	28.35	156
Average	34.78	121	20.82	121	44.45	124	47.81	149	24.70	108	25.80	143	24.77	164
No. of years	94	94	131	131	118	118	130	130	31	31	114	114	87	87
Standard 30 years' normal(c)	35.02	119	20.60	126	43.00	115	47.48	141	(d)25.76	(d)106	27.21	155	26.27	163

(a) Fairbairn Aerodrome; records in issues of the Year Book prior to No. 36 were for the station at Acton which closed down in 1939, while from Year Book No. 36 to Year Book No. 53 records were for the Commonwealth Forestry Bureau station. (b) Records taken from present site commenced 1883. (c) 1931-1960. (d) Commonwealth Forestry Bureau.



Prolonged dry spells are fairly common in much of Australia, particularly in inland areas. A discussion of droughts in Australia may be found in Gibbs W. J. and Maker J. V. *Rainfall Deciles as Drought Indicators*, Bureau of Meteorology Bulletin No. 48 (1967). A shorter account of droughts in Australia will be found in a special article in Year Book No. 45, pages 51–6. A more recent account is included with Chapter 22—Water Conservation and Irrigation in Year Book No. 54 of 1968.

*Rainfall and vegetation.* In general, the three main climatic zones of the continent exert a particular controlling influence on the general vegetation. These are the northern third of the continent where rainfall is almost always restricted to the warmer months of the year, the southern third where rainfall is predominantly a winter and spring event, and a transitional zone which experiences rainfall from both sources, although in greatly reduced quantity over the interior, which is subject to frequent drought.

The length of the growing season, or conversely the extent of dry periods during the year, decides the type of vegetation which establishes in a region. The climatic influence on vegetative response is primarily through soil moisture and temperature. Thus in colder south-eastern areas the growing season is mainly temperature dependent, but elsewhere the availability of soil moisture is the prime factor. All rainfall is not equally effective in increasing the soil moisture, its availability from the soil storage to plants depending on the extent of surface run-off, seepage beyond the root zone, and loss by surface evaporation. Furthermore, the effectiveness of available soil moisture depends on the evaporative demand of the local climate; for example, an inch of stored moisture may maintain vigorous plant growth for twice as long in Tasmania as in the warmer, drier atmosphere of inland New South Wales. Thus it is not a sound practice to assess the agricultural potential of different areas simply by reference to average rainfall.

Generally speaking, the length of the growing season exceeds nine months over the far south-west of Western Australia and in all eastern coastal districts from Cape York Peninsula to western Victoria, and within this region humid and semi-humid plant formations thrive. Soil types, of course, also play a part in the distribution of vegetation, but they too are, to a considerable extent, the result of climate and weather.

The climate of Arnhem Land (Northern Territory) is such that there is a considerable surplus of moisture for about five months of the warm season, followed regularly by a virtual drought which frequently reaches severe intensity, and this special combination of meteorological conditions results in annual and perennial vegetation adapted to this cycle.

Over the interior the position is more complex because of the lower levels of the rainfall, its greater variability, and the high evaporative power of the drier, warmer atmosphere. In this vast section of the continent the climatic demands are so severe that the vegetative formations of the moister zones (i.e. the mesophytes, requiring about five months or longer growing season) are unable to exist. Thus a plant species adapted to these very dry and variable conditions (xerophytes), e.g. spinifex, salt bush, blue bush, and stunted eucalypts, capable of maintaining a cattle population, predominates over the arid interior.

The arid and semi-arid lands of Western Australia and inland New South Wales which border the desert carry the majority of the sheep in these States. In New South Wales the most important vegetative formations in these areas are savannah (treeless plains), savannah woodland, mulga scrub, and mallee scrub. In Western Australia sclerophyllous grass steppe and mulga scrub border the deserts and are succeeded to the south by zones of mallee scrub and mallee heath.

*Rainfall intensity.* The study of extremely high rainfall intensities is important in the investigation of the flow characteristics of river systems, and flood prevention measures, the design of irrigation works, and hydro-electric schemes. The highest rainfalls recorded in a period of twenty-four hours up to 1968 for each State and Territory were: Western Australia, Whim Creek, 29.41 inches, 3 April 1898; Northern Territory, Roper Valley, 21.44 inches, 15 April 1963; South Australia, Ardrossan, 8.10 inches, 18 February 1946; Queensland, Crohamhurst, 35.71 inches, 3 February 1893; New South Wales, Dorrigo, 25.04 inches, 24 June 1950; Australian Capital Territory, Jervis Bay, 7.15 inches, 29 April 1963; Victoria, Balook, 10.81 inches, 18 February 1951; and Tasmania, Mathinna, 13.25 inches, 5 April 1929. Most of the very high intensities have occurred in the coastal strip of Queensland, where the combination of a tropical cyclone moving close to mountainous terrain provides ideal conditions for spectacular falls. For other very heavy falls at various localities reference may be made to Year Books No. 14, pages 60–4, No. 22, pages 46–8, No. 29, pages 43, 44 and 51, and No. 53, pages 32–4.

*Snow and hail.* For varying periods from late autumn to early spring snow usually covers the ground to a great extent on the Australian Alps above a level of about 4,500 to 5,000 feet, where in both New South Wales and Victoria ski-ing resorts operate throughout the season.

In Tasmania also the highlands are frequently covered above the 3,500 feet level for extended periods of the winter. There are, however, some years when snowfalls are much lighter than normal and even fail completely. Light snow has been known to fall occasionally as far north as the New England plateau in New South Wales (latitude  $31^{\circ}$  S.), and in exceptional seasons much of the dividing range from Victoria to Toowoomba (Queensland) has been covered above a level of about 4,000 feet. In ravines around Mount Kosciusko small areas of snow may persist throughout the summer after a heavy winter fall. This winter snowfall of south-eastern Australia is important in aiding the reliable flow of many streams which are utilised in the hydro-electric schemes of the Snowy Mountains, northern Victoria, and Tasmania. Snowfall at low terrain elevations occurs from time to time, particularly in Tasmania and Victoria, but falls are usually light and rarely lie more than a few days.

Hail is most frequent in winter and spring along the south-eastern coastal region of the continent and in Tasmania, where it is usually of a relatively small size. Summer storms, however, which are quite frequent, particularly in the highland plateau regions of eastern Australia, often produce stones of large size and of destructive intensity. Very large stones capable of piercing light gauge galvanised iron are reported from time to time, and damage to fruit crops in south-eastern Australia from large hail stones is quite frequent.

*Floods.* In general, flooding in Australia is most pronounced on the shorter streams flowing from the Great Dividing Range into the Pacific Ocean along the seaboard of Queensland and New South Wales. These floods are particularly destructive on the more densely populated coast of New South Wales. The chief rivers in this area are the Tweed, Richmond, Clarence, McLeay, Nepean, Hawkesbury, Hunter, and Shoalhaven, all of which experience quite frequent and considerable flooding. These floods occur chiefly in summer but may occur at any time of the year.

The great Fitzroy and Burdekin river systems in Queensland are also subject to floods during the summer wet season, while much of the heavy monsoon rain in northern Queensland flows southward through the normally dry channels of the network of rivers draining into Lake Eyre. This water may cause extensive floods over a vast area, but it is soon lost by seepage and evaporation and rarely reaches the lake in any quantity. The Condamine and other tributaries of the Darling also carry considerable volumes of water south through western New South Wales to the Murray, and flooding along their courses occurs from time to time.

Flooding also occurs from time to time, usually in autumn, winter, and spring, in the Murray-Murrumbidgee system of New South Wales and Victoria and on the smaller coastal streams of southern Victoria. In Tasmania, flooding of the north coast streams, particularly the South Esk system, is common in the same seasons. In South Australia some flooding has occurred in the lower reaches of the Murray owing to rainfall as far away as Queensland and south-eastern New South Wales. In the north of Western Australia and the Northern Territory, flooding of the coastal streams occurs frequently in summer but is not of such economic importance as the flooding of the eastern coastal streams of the continent, where many localities are more vulnerable to damage.

### Temperature

Conditions vary greatly for a particular individual even in a fixed location, so that it is difficult to describe general comfort variability uniquely throughout a region as varied climatically as Australia. A number of indexes which attempt to incorporate some of the factors concerned\* have been used experimentally from time to time, and further research continues on this very difficult problem. Generally speaking, there is an increase in discomfort northwards within the tropical regions of Australia in summer, owing to the heat and high absolute humidity which reached a maximum in the extreme north of the continent. Such conditions are, however, ameliorated to a large extent in highland areas such as the Atherton Tableland in Queensland. No part of Australia is uncomfortably hot in winter, and only in a small area of the Australian Alps and highland Tasmania does bodily strain due to cold exist in winter. The history of the settlement of the northern regions of Queensland and the Northern Territory indicates that with accelerating development of studies and experience in the arrangement of living and working accommodation, clothing, and general way of life, the effects of extremes of climate can be minimised.

For some further discussion of the problems of temperature and comfort conditions reference may be made to Ashton, H. T., *Meteorological Data for Air Conditioning in Australia*, Bureau of Meteorology Bulletin No. 47 (1964).

*Average seasonal temperature distribution.* Plates 6 to 9, pages 38-9, show the normal daily maximum and minimum temperatures for January and July, which may be taken as indicative respectively of the summer and winter seasons in Australia. Further detailed temperature data are presented on pages 49-58 for the capital cities and more important country towns of the Commonwealth.

\* See Year Book No. 53, page 35.



On the basis of average annual mean temperatures, and latitude for latitude, Australia is somewhat cooler than the other land masses of the southern hemisphere and considerably cooler than the same latitudes in the large continental areas of the northern hemisphere. This is due to the insular nature of Australia and the stronger general circulation of the atmosphere in the southern hemisphere resulting in the transport of higher latitude (cooler) air into the subtropical regions.

July is the month with the lowest mean temperature in all parts of the continent, while the month with the highest mean temperature varies from February in Tasmania and southern Victoria to December in the northern part of the continent and November in Darwin. The lateness of the month of highest average temperature in the extreme south of the continent is due in part to the effect of the Southern Ocean, where the sea surface temperature reaches its maximum in February. The cooler period of the late summer in the north is due largely to increased cloudiness associated with the inflow of north-west winds with the onset of the monsoon season.

In January average maximum temperatures exceed 95° F. over a vast area of the interior of the continent, and over large areas exceed 100° F. The hottest part of Australia is situated in the north of Western Australia around the Marble Bar and Nullagine area, where the daily maximum screen temperature during the summer frequently exceeds 100° F. for weeks at a time.

The marked change of maximum temperature in summer with distance from the sea, in areas close to the coasts, particularly along the Great Australian Bight and the Indian Ocean coast of Western Australia, is due to the penetration inland of the vigorous sea breezes which are initiated by the considerable temperature contrast between land and sea surface temperatures. The 75° F. isotherm of January mean maximum temperature skirts the southern coast of the continent from south-western Western Australia to Gippsland.

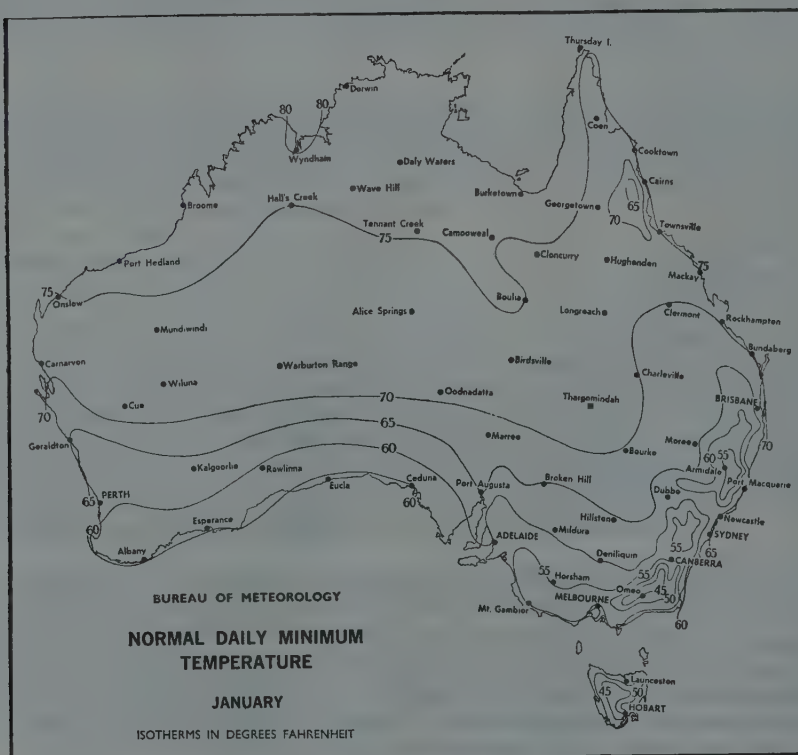
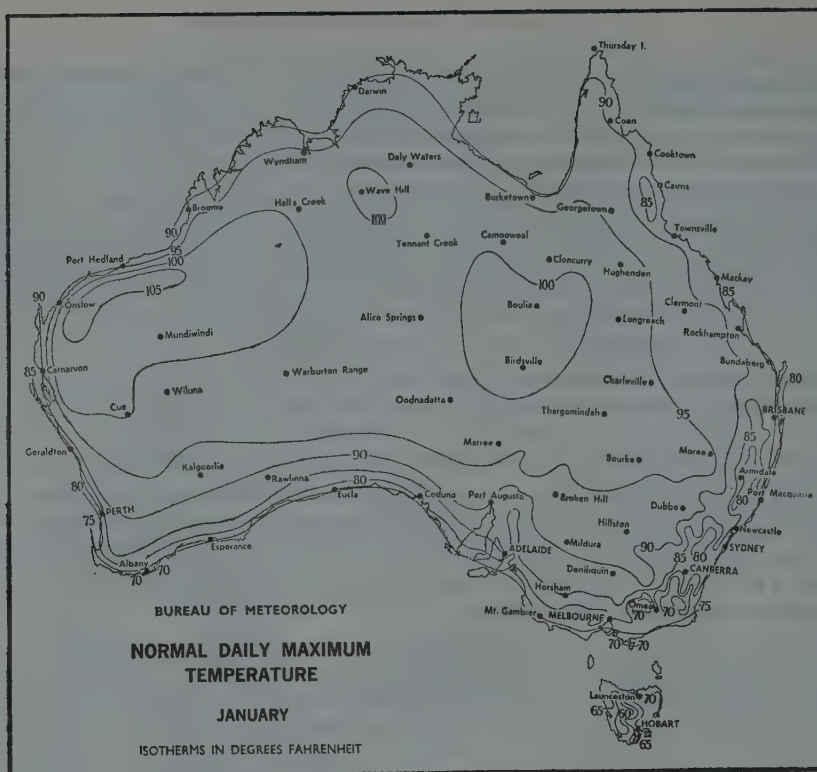
In January the mean minimum temperatures in the tropics, except for some highland regions, exceed 72° F., with a gradual decrease southward to values of 55° F. in Victoria and 50° F. in Tasmania. Highland regions in the south have mean values of 45° F. and lower. In July a more regular latitudinal distribution of mean maximum temperature is evident, only the extreme north of the continent having mean maxima higher than 80° F. Values lower than 60° F. are general over the south-eastern part of the continent, with mean maxima falling below 40° F. in small alpine areas. Average night minimum temperatures in July fall below 45° F. in areas south of the tropics and away from the coast. Alpine regions again record the lowest temperatures with some areas experiencing means lower than 25° F.

*Extreme variation and daily range.* Only at a few inland places in Australia does the absolute range of temperature (i.e. the range from the highest maximum to the lowest minimum) exceed 100° F. Generally it is in the range 70° F. to 90° F. in the inland areas and somewhat less on the coasts. The highest temperature recorded in Australia was 127.5° F. at Cloncurry (Queensland) on 16 January 1889 and the lowest -8° F. at Charlotte Pass in the southern Alps on 14 July 1945 and again on 22 August 1947. The world record maximum temperature is 136° F. at Azizia (Tripoli) on 13 August 1922 and the world record minimum temperature -126.9° F. at Vostok on the Antarctic plateau on 24 August 1960.

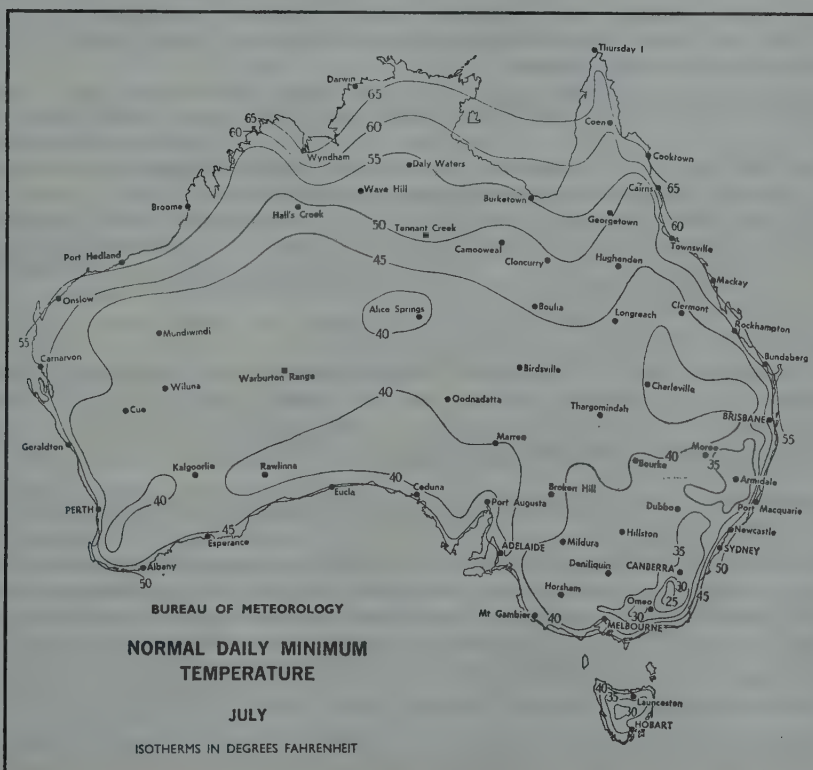
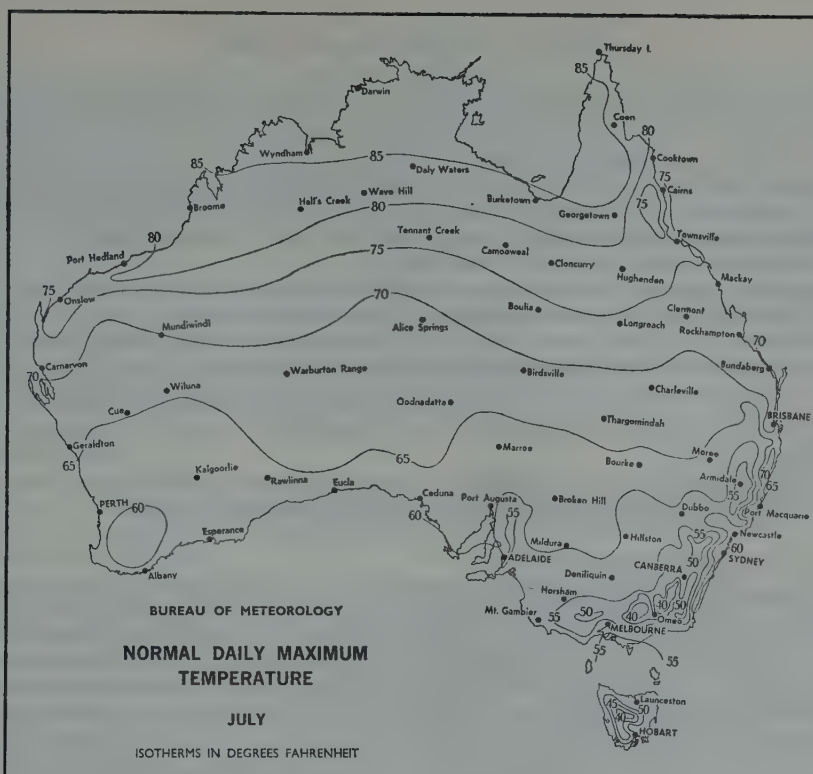
*High temperature.* Heat waves with a number of successive days higher than 100° F. are relatively common in many parts of Australia. With the exception of the north-western coast of Western Australia, however, most coastal areas do not usually experience more than a few days in succession of such conditions. The frequency of such conditions increases inland, and periods of up to twenty days have been recorded over most of the settled areas. This figure increases in western Queensland and north-western Western Australia to more than sixty days in places. The central part of the Northern Territory and the Marble Bar-Nullagine area of Western Australia have recorded the most prolonged heat waves for the Australian region. The longest consecutive period of daily maxima greater than 100° F. was 160 consecutive days recorded in Marble Bar during the summer of 1923-24.

*Frosts.* Injury to the tissues of growing plants is not caused until the temperature has fallen considerably below the freezing point of water (32° F.), and a ground frost is regarded as having occurred when the grass thermometer has fallen below 30.4° F. However, as terrestrial minima are not recorded at all stations, it is usual for statistical purposes to regard the registration of a screen thermometer of 36° F. as indicating a 'light' frost. A map showing frequency of days with screen minima higher than 36° F. (i.e. the frost free period) is reproduced in plate 10, page 42. A 'heavy' frost is taken as a screen reading of less than 32° F. A 'black' frost occurs with a combination of low temperature and low humidity, and, although frost crystals are not observed on the ground, damage takes place to the plant cells by the freezing and expansion of the moisture they contain.





**PLATES 6 and 7**



**PLATES 8 and 9**

The frequency of frost depends largely on altitude, latitude, and proximity to the sea, and locally, to a very large extent, on even minor variations in contour of the land. The parts of Australia which are most subject to frost are the eastern highlands from north-eastern Victoria to the western Darling Downs in southern Queensland. Most stations in this region experience more than ten nights a month with readings of 32° F. or under for three to five months of the year. On Tasmania's Central Plateau similar conditions occur for three to six months of the year. Heavy frosts are comparatively infrequent in Western Australia, except in parts of the south and south-west. In South Australia frosts are most frequent in the agricultural areas of the south-east.

Frosts may occur within a few miles of the coast over the whole continent except the Northern Territory and most of north Queensland. Regions in which frosts may occur at any time of the year comprise most of Tasmania, large areas of the tablelands of New South Wales, much of inland Victoria, particularly the north-east, and a small part in the extreme south-west of Western Australia. Over most of the interior of the continent, and on the highlands of Queensland as far north as the Atherton Plateau, frosts commence in April and end in September, but they are infrequent in these months. Minimum temperatures below 32° F. are experienced in most of the sub-tropical interior in June and July.

For further details of frost conditions in Australia reference should be made to Foley, J. C., *Frost in the Australian Region*, Bureau of Meteorology Bulletin No. 32 (1945).

### Humidity and saturation deficit

The annual variation of vapour pressure\* for regions outside the tropics closely follows that of temperature. However, the mean relative humidity† in the temperate regions is generally highest in winter and lowest during the summer. In northern Australia the highest relative humidity occurs during the rainy summer season. The relative humidity variation during the day closely follows the diurnal variation of temperature, being highest with low temperatures and lowest with high temperatures. The relative humidity at 9 a.m. for Australian conditions may be considered as a close approximation to the mean for the whole day. In the tables for the capital cities, pages 49-56, the mean monthly vapour pressure and relative humidity for 9 a.m., together with the monthly extremes, are listed. The order of the stations in descending values of mean annual vapour pressure at 9 a.m. is Darwin, Brisbane, Sydney, Perth, Melbourne, Adelaide, Canberra, and Hobart, while the annual mean of the 9 a.m. relative humidities diminishes in the order Darwin, Sydney, Canberra, Melbourne, Brisbane, Hobart, Perth, and Adelaide.

In January the mean saturation deficit‡ at the mean temperature for the month has a maximum value of over 0.90 inches in the central parts of Western Australia and in south-western Queensland. Gradual decreases occur towards the coast, where values close to the north, east, and south coastlines are around 0.20 inches. On the western coast values are somewhat higher, and a strong gradient exists in the saturation deficit in the narrow region bordering the Indian Ocean. In July the variation is less, with maxima of 0.40 inches in the dry north of the Northern Territory and Western Australia, slowly decreasing generally to the south, with values over most of the south-east and extreme south-west of the continent being less than 0.10 inches. Extremely low values (less than 0.025 inches) exist in July over the highlands of south-eastern Australia and Tasmania.

### Evaporation

In Australia the study of evaporation is of great importance, since in its drier regions water conservation must be practised by the use of tanks and dams. The magnitude of the economic loss by evaporation may be appreciated from plate 11, page 42, which shows that the yearly amount varies from 20 inches over the highland areas of central Tasmania to more than 130 inches in the northern and north-western part of South Australia.

Over an area of some 70 per cent of the continent, comprising most inland districts and extending to the coast in the north-west of Western Australia and to the head of the Great Australian Bight, the rainfall does not exceed the evaporation loss in any month of the year. The central and north-western portion of the continent experience evaporation far in excess of their rainfall. Vegetation over these areas is characterised by acacia, scrub steppe, and arid scrub, while many areas are merely sand hills and stony desert. Over many of the drier areas, however, particularly in the inland areas of south-eastern Australia, the loss of rainfall by evaporation is made good to some extent by the development of irrigation schemes. Some of these schemes, such as those at the Murrumbidgee Irrigation Area in New South Wales and at Mildura in Victoria and Renmark in South Australia, have been very successful. The Snowy Mountains Hydro-electric Scheme has also resulted in the

\* Vapour pressure—the pressure exerted by the water vapour of the atmosphere. † Relative humidity—the ratio of the existing vapour pressure to the saturated vapour pressure at the existing temperature, expressed as a percentage.  
‡ Saturation deficit—the difference between the saturation vapour pressure and the actual vapour pressure. See Year Book No. 53, page 37 for further information.



large scale supply of water from the south-eastern highlands of Australia for use in the drier areas to the west of the ranges in New South Wales and Victoria. The future development of such schemes as these holds promise for the reclamation of many marginal areas in Australia, which because of low rainfall and high evaporation are at present of little economic value.

Since the loss by evaporation depends largely on the net radiation absorbed and consequently on the extent of the exposed area, tanks and dams so designed that the surface area shall be a minimum are advantageous. Further, the more protected they are from the direct rays of the sun and from winds by means of suitable tree planting the less will be the evaporation loss. The Mansfield process for the treatment of tanks and dams by a mono-molecular chemical film which materially reduces evaporation is a recent development which is already giving beneficial results, particularly on large water storage areas. Such improvements are of considerable importance to the pastoralists of the drier regions of Australia and to water supply authorities.

Further information on evaporation may be found in Hounam, C. E., *Evaporation in Australia*, Bureau of Meteorology Bulletin No. 44 (1961).

### Sunshine and cloud

The proportion of the sky covered by cloud is of considerable meteorological and climatological importance. A cloud cover inhibits both incoming and outgoing radiation and thus profoundly affects the temperature distribution and other factors at the earth's surface. Cloud amount is measured in eighths of the sky covered.

In Australia the seasonal changes in cloudiness correspond closely to that of rainfall. In the southern or more temperate parts of the continent, particularly in the coastal and low lying areas, the winter months are generally more cloudy than the summer. This is due to the formation of extensive areas of stratiform cloud and fog during the colder months, when the structure of the lower layers of the atmosphere favours the physical processes resulting in this type of cloud. A particularly strong annual periodicity exists in the monsoonal regions of northern Australia, where it is heavily clouded during the summer wet season and practically cloudless during the winter 'dry'. Cloudiness is higher near coasts and on the windward slopes of the mountains of eastern Australia and is least over the dry interior parts of the continent.

A close relationship exists between cloud amount and number of sunshine hours, and it is possible to estimate from cloud data the equivalent number of sunshine hours over a given period. These data can be incorporated with records of direct measurement of sunshine hours, and approximate distribution maps produced for Australia. Maps of the mean sunshine distribution for January and July are reproduced in plates 12 and 13, page 43 and indicate the main features of the variation over Australia in these months.

Except for Tasmania and a narrow fringe bordering the southern, eastern, and northern coasts, the greater part of the continent receives more than 3,000 hours of sunshine each year, and in Central Australia and the mid-western coast of Western Australia totals in excess of 3,500 hours occur. The extreme south coast receives in the main 2,000 to 2,500 hours annually, while the east coast regions of New South Wales and Queensland receive 2,500 to 3,000 hours. A minimum of less than 1,750 hours occurs on the west coast and highlands of Tasmania.

Mean amounts of cloud for each month at the capital cities are included in the tables on pages 49–56, as are the mean daily hours of sunshine. The latter figure is a good single measure of the relative climatic characteristics of the individual cities for different months of the year.

### Wind

Australia lies in those latitudes of the southern hemisphere where it is influenced largely by two wind systems:

- (a) the south-east trade winds blowing on the equatorial side of the mid-latitude anticyclones; and
- (b) the westerlies south of the mid-latitude anticyclones in which successive low pressure systems move eastward over the Southern Ocean.

The only pronounced seasonal variations of atmospheric pressure in the middle and high latitudes of the southern hemisphere are related to the latitudinal shift in the axes of the sub-tropical high pressure systems and to the change in the tracks of the migratory anticyclones. The latter systems move generally from west to east in the Australian region between the semi-permanent oceanic anticyclones of the Indian and Pacific Oceans. The mean path of these systems lies over southern Australia during the summer but moves northwards during the winter with the thermal equator. The movement is only of a few degrees of latitude but it is of very great importance to the climate of the Australian



PLATES 10 and 11



PLATES 12 and 13



continent. During the summer months, when the anti-cyclones move on a more southerly track, the south-east trades affect the whole coast of eastern Australia north of around latitude  $30^{\circ}$  S., the westerlies retreating to higher latitudes, and conditions are more settled over southern Australia which then lies close to the axis of the anticyclones. In winter the anticyclones move further north, the trades affect only the northern parts of the continent, and southern Australia is exposed to the westerlies of the Southern Ocean.

In summer, with the retreat of the anticyclones to the south, the whole of northern and north-western Australia is exposed initially to light wind systems, and then during the period from December to April to the effects of the north-west monsoon. This process, which is associated with an inflow of north-west winds and intensive rains, is not as regular or persistent as the south-west monsoon of south-east Asia. However, it is a sufficiently regular feature of the climate of northern Australia to be designated as the north-west season, or, as it is best known in the area, 'the wet'. Its influence affects areas as far south as central Queensland, but southern Queensland and the area east of the Great Dividing Range are largely still under the influence of the south-east trades. Fringe or marginal areas on the southern limits of the monsoonal penetration over the continent have a shorter and more uncertain 'wet' season, which in some years fails to appear at all. With the northward advance of the anticyclones in autumn, the monsoon gives way again to the trades, and 'the dry' of northern and north-western Australia commences.

The general features of these wind patterns may be seen in the wind rose diagrams of plates 14 and 15, pages 45–6. It is important, however, to note the dynamic nature of the atmosphere, and that the continual growth, decay, and motion of the pressure systems result in a wide diversity of wind-flow types. Descriptions of wind conditions for particular geographical areas and seasons can thus be only of a very generalised kind. Further, local features can also be imposed on the overall wind pattern—channelling of winds due to topography (e.g. the high frequency of north-west winds in Hobart) and the marked summer sea breeze characteristics of most of the Australian coast, particularly near the Great Australian Bight as shown in the diagrams of 3 p.m. wind frequencies.

### Storms and tropical cyclones

In general there are two types of weather systems in Australia which produce very strong winds and heavy rainfalls over large areas of the continent:

- (a) the active depressions which move westwards over the Southern Ocean; and
- (b) the tropical cyclones or hurricanes of north-eastern and north-western Australia.

During the winter the southern shores of the continent are subject to the deep depressions of the southern low pressure belt. They are felt most severely over the south-west of Western Australia, the south-east of South Australia, southern Victoria, and Tasmania, and may move inland in all these regions bringing strong winds and heavy rainfall. Further extensions of this type of system frequently develop close to the coast of New South Wales, often bringing severe weather to this region and to southern Queensland. These are generally known as 'east coast lows'.

The frontal systems (i.e. the narrow zones characterised by cloud and bad weather separating two air masses of different density) which are associated with these depressions vary widely in character. A common type in south-east Australia is a cold front located in a  $\wedge$  shaped trough. Such a system usually brings very strong north to north-west winds in advance of the front with a very abrupt backing of the wind to colder west to south-westerly winds after the frontal passage. Such frontal passages are, in their most severe form, associated with thunderstorms and line squalls, heavy rain, and a change to cold winds and showers. These violent changes with the passage of a cold front and strong southerly winds frequently affect the New South Wales coast as far north as Newcastle during the winter, and are popularly known as 'southerly busters'.

The most extensive rains of inland Australia occur when moist tropical air which has moved inland is lifted by convergence ahead of a slow moving colder air mass moving from the southern Ocean. The coast of Queensland, particularly the section from Cooktown to Mackay and the adjacent waters, is subject to visitations by tropical cyclones (the 'hurricanes' of the Caribbean and 'typhoons' of the China Sea). These destructive systems can affect this region from December to April, normally forming in the Coral Sea, moving south-west close to the coast and then passing away to the south-east into the Pacific. They may, however, cross the coast from time to time and bring torrential rain and violent winds (often more than 100 mph) to the coastal regions.

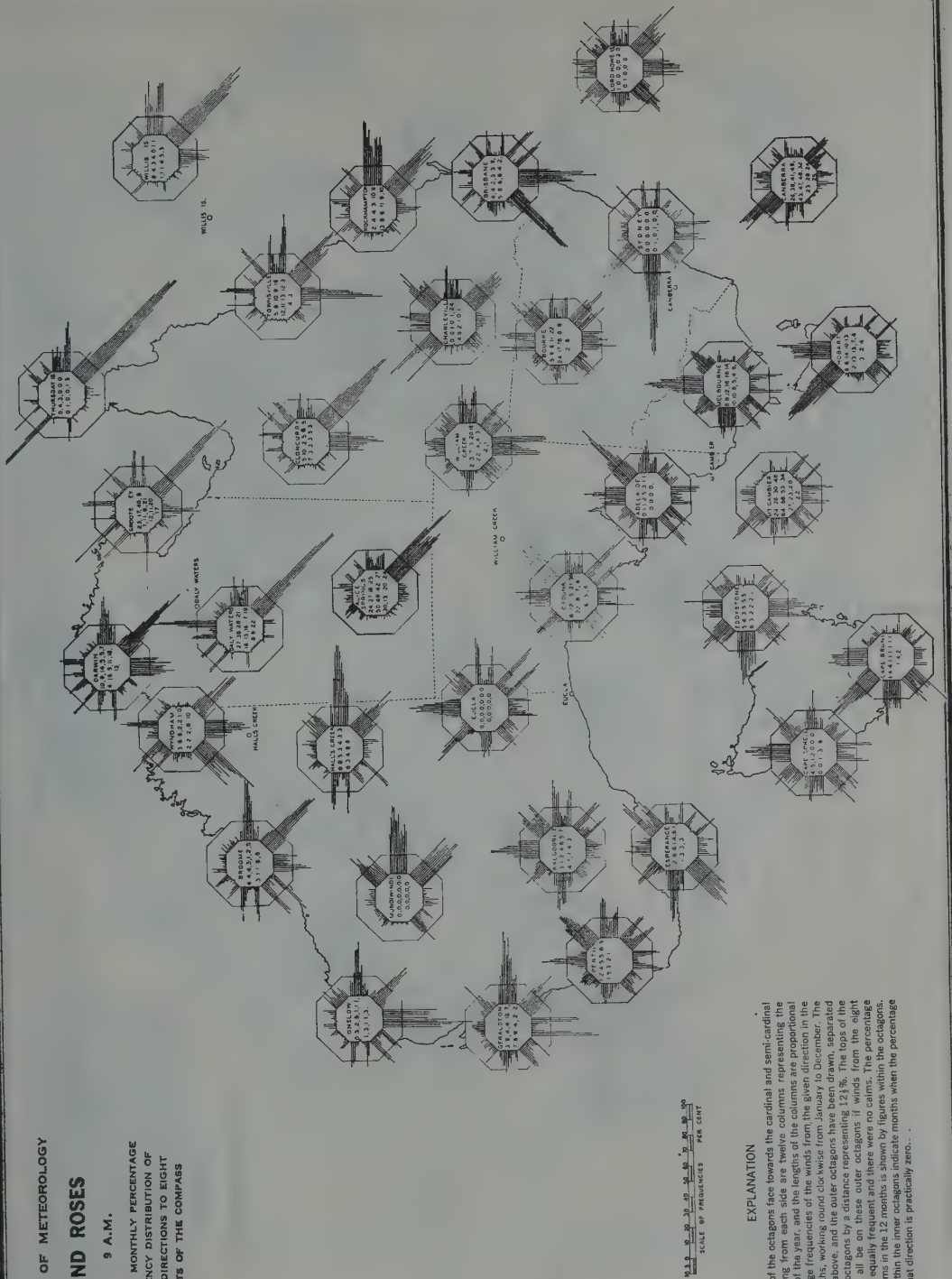
Similar systems affect the north-west coast of Western Australia where they bear the local name of 'willy willies', a name which is, however, often used generally in Australia for minor local whirlwinds or dust devils. The season in this region generally lasts from November to April, the storms originating in the Timor or Arafura Seas travelling usually south-west and approaching the coast most commonly between latitudes  $20^{\circ}$  S. and  $22^{\circ}$  S. Thence the systems may move southwards following the coast,

BUREAU OF METEOROLOGY

WIND ROSES

9 A.M.

SHOWING MONTHLY PERCENTAGE  
FREQUENCY DISTRIBUTION OF  
WIND DIRECTIONS TO EIGHT  
POINTS OF THE COMPASS

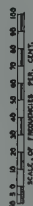


EXPLANATION

The sides of the octagons face towards the cardinal and semi-cardinal points. Projecting from each side are lines representing the frequency of winds from the given direction in the twelve months of the year. The length of the columns are proportional to the frequency of the winds from the given direction in the twelve months, working round clockwise from January to December. The scale is shown above, and the outer octagons have been drawn, separated from the inner octagons by a distance representing 121%. The tops of the columns would all be on these outer octagons if winds from the eight directions were equally frequent and there were no calms. The frequency of calms in the 12 months is shown by the space between the inner and outer octagons. Small dashes within the octagons indicate months when the percentage of winds from that direction is practically zero.

**WIND ROSES**

SHOWING MONTHLY PERCENTAGE  
FREQUENCY DISTRIBUTION OF  
WIND DIRECTIONS TO EIGHT  
POINTS OF THE COMPASS



The sides of the octagons face towards the cardinal and semi-cardinal points. Projecting from each side are twelve columns representing this number of months. The lengths of the columns are proportional to the number of days in the months from the given direction in the particular year. Working round clockwise, the months are numbered in successive months, and the outer octagons have been depicted and numbered from the inner octagons by a distance representing 121/2%. The tops of the columns from the inner octagons by the outer octagons have been depicted and numbered all on these outer octagons if winds from the eight directions were equally frequent and there were no winds. The percentage frequency of calms in the 12 months is shown by figures within the octagons. Small dashes within the inner octagons indicate months when the percentage of winds from that direction was practically zero.



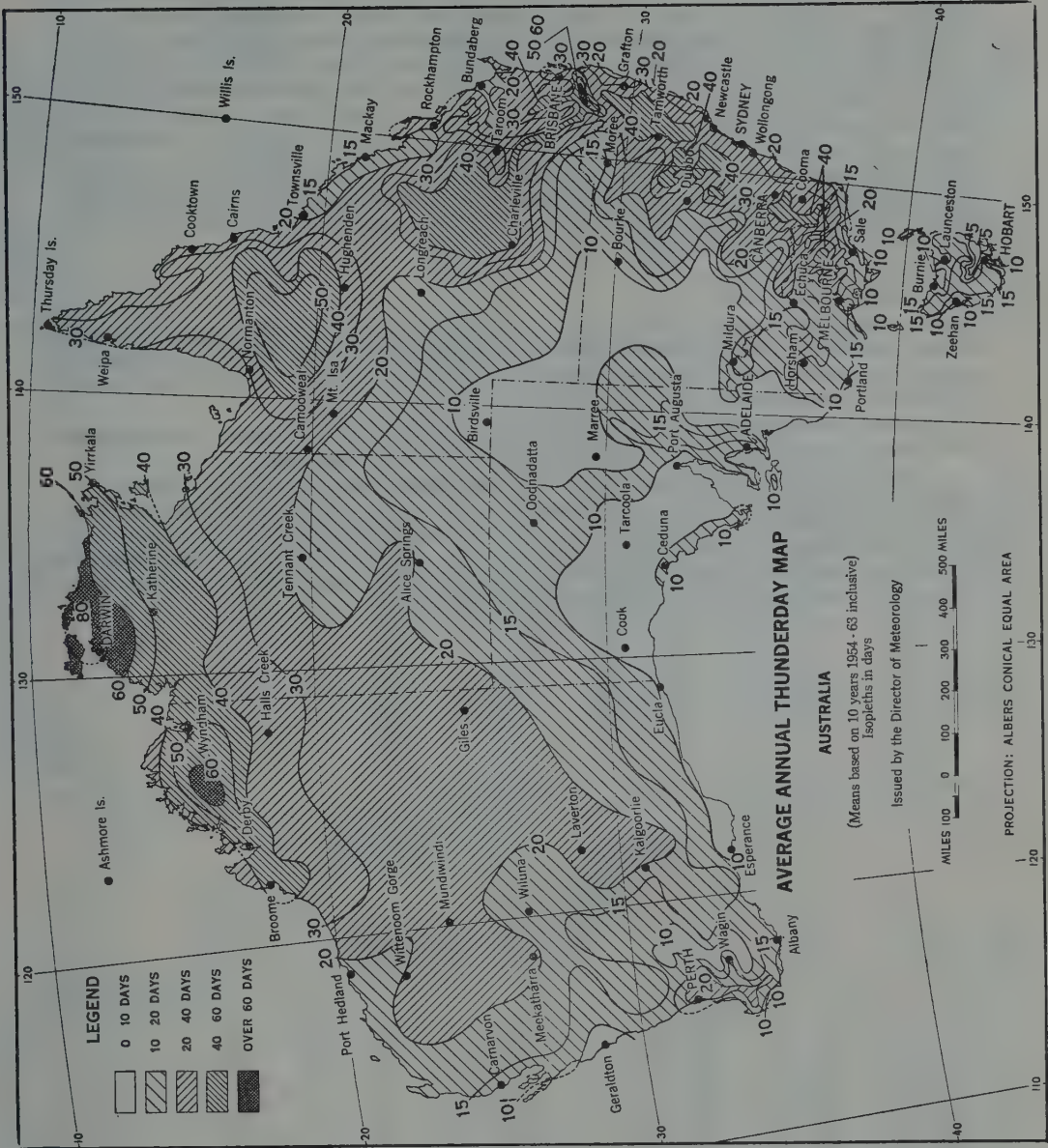


PLATE 16

or sometimes cross inland bringing high rainfalls to the otherwise dry interior of the continent. A further region which is affected somewhat less frequently by tropical cyclones is the coast of Arnhem Land in the Northern Territory and the waters and coasts of the Gulf of Carpentaria.

Tropical cyclones, in general, soon lose their intensity on crossing from sea to land, but, although the wind force rapidly abates, they are still capable of producing the heavy rainfall which leads to flooding of coastal rivers, damage to stock and property, and general disruption of transport.

Thunderstorms which bring local heavy rain and strong winds are common to most of Australia. They are also of particular importance because of the lightning damage which they cause to power transmission lines, and have been extensively studied for the purpose of siting electrical installations as far as possible in areas of low thunderstorm occurrence. Plate 16, page 47, shows the number of days annually on which thunder is heard, which is a better observational criterion than lightning observed. The region of maximum thunderstorm activity is the extreme north-west of the continent and the region south-east of the Gulf of Carpentaria. In the more settled areas maximum thunderstorm occurrence is in central western and south-eastern Queensland and the highland areas of New South Wales. The minimum number of storms occur over the interior of South Australia, western New South Wales, and eastern Tasmania.

#### **Climatological tables**

The averages and extremes for a number of elements which have been determined from long series of observations at the Australian capitals up to and including the year 1969 (data for Canberra up to 1970) are given in the following pages, together with more limited data for the larger country towns of the Commonwealth.

Barometric and vapour pressure data, which were expressed in inches of mercury in years before 1966, are now expressed in millibars (1 millibar = 0.02953 inches of mercury).

The following points apply, except where otherwise stated. Where records are available, prevailing winds have been determined over a standard period of thirty years from 1911 to 1940. Other averages and extremes, including evaporation, temperature, and rainfall records for which thirty years normals have been published for a number of years past, have, since 1965, been extracted from all available years of actual record, but the number of years quoted does not include intervening periods when observations were temporarily discontinued.

## CLIMATOLOGICAL DATA: PERTH, WESTERN AUSTRALIA

(Lat. 31° 57' S., Long. 115° 52' E. Height above M.S.L. 51 ft)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 71 ft)			Prevailing direction		Mean amt evapora- tion (in)	No. days thunder	Mean amt clouds		No. clear days
		Average miles per hour	Highest mean speed in one day (mph)	Highest gust speed (mph)	9 a.m.	3 p.m.			9 a.m., 3 p.m., 9 p.m. (a)		
No. of years of obser- vations	85	30(b)	70	55	30(b)	30(b)	71	73	30(b)	30(b)	
January	1,012.6	10.9	26.3 27/98	50	E	SSW	10.37	1.0	2.3	14	
February	1,013.0	10.7	21.5 6/08	54	ENE	SSW	8.77	1.0	2.5	13	
March	1,015.3	10.1	21.5 6/13	70	E	SSW	7.64	1.0	2.8	12	
April	1,017.9	8.5	31.5 25/00	63	ENE	SSW	4.66	1.0	3.4	9	
May	1,017.9	8.4	27.3 29/32	74	NE	WSW	2.81	2.0	4.3	6	
June	1,017.6	8.4	30.2 17/27	80	N	NW	1.88	2.0	4.7	5	
July	1,018.9	8.8	33.5 20/26	85	NNE	W	1.82	1.0	4.5	5	
August	1,018.8	9.4	31.9 15/03	97	N	WNW	2.47	1.0	4.5	6	
September	1,018.4	9.4	28.5 11/05	68	ENE	SSW	3.56	1.0	3.9	8	
October	1,017.0	10.0	26.7 6/16	65	SE	SW	5.48	1.0	3.8	8	
November	1,015.5	10.7	25.7 18/97	63	E	SW	7.61	1.0	3.1	9	
December	1,013.4	11.0	25.6 6/22	64	E	SSW	9.71	1.0	2.6	13	
Year { Totals							66.78	14.0		108	
Year { Averages	1,016.4	9.7			E	SSW			3.5		
Year { Extremes			33.5	97							
			20/7/26								

(a) Scale 0-8. (b) Standard thirty years normal (1911-1940).

## TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	73	73	73	73	73	63(a)	71	72
January	85.0	63.6	74.3	110.7 29/56	48.6 20/25	177.3 22/14	39.5 20/25	10.4
February	85.5	63.8	74.7	112.2 8/33	47.7 1/02	173.7 4/34	39.8 1/13	10.0
March	81.9	61.6	71.7	106.4 14/22	45.8 8/03	167.0 19/18	36.7 (b)	8.8
April	76.0	57.3	66.7	99.7 9/10	39.3 20/14	157.0 8/16	30.8 26/60	7.2
May	69.1	52.7	60.9	90.4 2/07	34.3 11/14	146.0 4/25	25.0 31/64	5.8
June	64.5	49.8	57.1	81.7 2/14	34.9 22/55	135.5 9/14	25.9 27/46	4.7
July	62.9	47.9	55.4	76.4 21/21	34.2 7/16	133.2 13/15	25.1 30/20	5.3
August	64.1	48.2	56.1	82.0 21/40	35.4 31/08	145.1 29/21	26.6 18/66	6.2
September	66.8	50.1	58.5	90.9 30/18	36.7 6/56	153.6 29/16	27.2 (c)	7.1
October	70.0	52.5	61.3	99.1 29/67	39.6 6/68	161.2 19/54	29.8 16/31	8.2
November	76.1	56.8	66.5	104.6 24/13	42.0 1/04	167.0 30/25	34.8 1/68	9.6
December	81.1	60.8	70.9	108.1 31/68	47.5 29/57	168.8 11/27	38.0 29/57	10.4
Year { Averages	73.6	55.4	64.5	112.2	34.2	177.3	25.0	7.8
Year { Extremes				8/2/33	7/7/16	22/1/14	31/5/64	

(a) Records discontinued 1963. (b) 8/1903 and 16/1967. (c) 8/1952 and 6/1956.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pressure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog Mean No. days
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly	
No. of years of observations	30(a)	30(a)	73	73	94	94	94	94	73
January	14.8	51	63	41	0.33	3	2.17 1879	Nil (b)	1.74 27/79
February	14.7	51	65	43	0.43	3	6.55 1955	Nil (b)	3.43 17/55
March	14.7	57	66	46	0.80	4	5.71 1934	Nil (b)	3.03 9/34
April	13.4	61	75	51	1.81	8	5.85 1926	Nil 1920	2.62 30/04
May	12.4	70	81	61	4.95	14	12.13 1879	0.77 1949	3.00 17/42
June	11.4	75	85	68	7.37	17	18.75 1945	2.16 1877	3.90 10/20
July	10.9	76	88	69	6.86	18	16.73 1958	2.42 1876	3.00 4/91
August	10.7	71	83	62	5.52	18	12.53 1945	0.46 1902	2.91 14/45
September	11.6	66	75	58	3.15	14	7.84 1923	0.34 1916	1.86 18/66
October	11.7	60	75	52	2.15	12	7.87 1890	0.15 1946	1.97 4/67
November	12.7	52	66	41	0.82	6	2.78 1916	Nil 1891	1.54 29/56
December	13.9	51	63	39	0.58	4	3.17 1951	Nil (b)	1.84 3/51
Year { Totals					34.77	121			
Year { Averages	12.7	62					18.75	Nil (c)	3.90
Year { Extremes			88	39			6/1945		10/6/20

(a) Standard thirty years normal (1911-1940). (b) Various years. (c) November to April, various years.

Figures such as 27/98, 29/56, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.



## CLIMATOLOGICAL DATA: DARWIN, NORTHERN TERRITORY

(Lat. 12° 28' S., Long. 130° 51' E. Height above M.S.L. 97 ft)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 117 ft)				Mean amt evapo- ration (in)	No. days thun- der	Mean amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days	
		Aver- age miles per hour	Highest mean speed in one day (mph)	High- est gust speed (mph)	Prevailing direction					
					9 a.m.	3 p.m.				
No. of years of obser- vations . . . . .	85	15	..	17 (b)	..	..	9	30	30	30
January . . . . .	1,006.1	6.1	..	66	NW & S	W & NW	6.04	13.0	5.7	1
February . . . . .	1,006.3	6.7	..	63	W & S	W & NW	5.61	10.0	5.6	1
March . . . . .	1,007.2	5.3	..	98	SE	W & NW	6.14	10.0	5.0	3
April . . . . .	1,009.2	6.1	..	42	SE	E	6.49	4.0	2.8	11
May . . . . .	1,010.9	6.5	..	39	SE	E	7.27	0.2	1.7	19
June . . . . .	1,012.2	6.5	..	40	SE	E & SE	6.97	0.0	1.3	22
July . . . . .	1,012.7	6.2	..	39	SE	E & SE	7.05	0.0	1.1	23
August . . . . .	1,012.6	5.9	..	45	SE	NW & N	7.73	0.0	1.0	22
September . . . . .	1,011.7	6.2	..	40	SE & S	NW & N	8.07	1.0	1.6	18
October . . . . .	1,010.5	6.2	..	53	S	NW & N	9.17	5.0	2.6	10
November . . . . .	1,008.7	5.5	..	73	W & S	NW & N	8.20	12.0	3.8	4
December . . . . .	1,006.9	6.2	..	66	NW & S	NW & N	7.18	14.0	4.8	2
Year { Totals . . . . .	..	..	..	..	..	..	85.92	69.2	..	137
Averages . . . . .	1,009.6	6.1	..	..	SE	NW	..	..	3.1	..
Extremes . . . . .	..	..	..	98	..	..	..	..	..	..

(a) Scale 0-8. (b) Several incomplete years.

## TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sun- shine			
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass				
No. of years of observations	85	85	85	86(a)	86(a)	26(b)	..	15			
January	89.9	77.0	83.5	100.0	2/82	68.0	20/92	168.0	26/42	..	5.8
February	89.5	76.6	83.1	100.9	20/87	63.0	25/49	163.6	(c)	..	6.2
March	90.4	76.6	83.5	102.0	(d)	66.6	31/45	165.6	23/38	..	6.9
April	91.7	75.5	83.6	104.0	7/83	60.8	11/43	163.0	1/38	..	8.3
May	90.2	72.2	81.2	102.3	8/84	57.5	28/67	160.0	5/20	..	9.5
June	87.7	68.9	78.3	98.6	17/37	53.8	23/63	155.2	2/16	..	9.8
July	86.9	67.2	77.1	98.0	17/88	50.7	29/42	156.0	28/17	..	9.8
August	88.7	69.3	79.0	98.0	19/00	56.4	11/63	156.2	28/16	..	10.4
September	90.9	73.6	82.3	102.0	20/82	62.1	9/63	157.0	(e)	..	9.9
October	92.6	77.0	84.8	104.8	17/92	66.9	8/66	160.5	30/38	..	9.5
November	92.9	77.6	85.3	103.3	9/84	66.8	4/50	170.4	14/37	..	8.2
December	91.7	77.6	84.7	102.0	9/83	65.0	4/60	169.0	26/23	..	6.9
Year { Averages	90.3	74.1	82.2	104.8	..	50.7	..	170.4	..	..	8.4
Extremes	..	..	..	104.8	..	50.7	..	170.4	..	..	..
				17/10/1892		29/7/42		14/11/37			

(a) Years 1882-1941 at Post Office, 1942-1966 at Aerodrome; sites not strictly comparable. (b) Records discontinued 1942.  
(c) 5/1938 and 23/1938. (d) 26/1883 and 27/1883. (e) 28/1916 and 3/1921.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog Mean No. days
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day	
No. of years of observa- tions . . . . .	85	85	57(a)	57(a)	86(b)	69	100(c)	100(c)	100(c)	30
January . . . . .	31.1	80	89	69	15.40	19	27.86 1896	2.67 1906	11.67 7/97	0.0
February . . . . .	31.1	81	88	71	13.00	18	28.23 1956	0.53 1931	11.00 18/55	0.0
March . . . . .	30.7	80	84	69	10.24	17	23.42 1965	0.81 1911	7.18 6/19	0.0
April . . . . .	27.0	72	80	60	4.05	8	23.74 1891	Nil 1950	6.22 4/59	0.0
May . . . . .	21.8	65	76	49	0.56	1	10.27 1882	Nil (d)	2.19 6/22	0.0
June . . . . .	18.7	63	75	52	0.12	0	1.53 1902	Nil (d)	1.32 10/02	0.4
July . . . . .	17.6	62	71	47	0.05	0	2.56 1900	Nil (d)	1.71 2/00	1.1
August . . . . .	20.6	66	73	53	0.06	0	3.30 1947	Nil (d)	3.15 22/47	0.0
September . . . . .	24.7	68	73	54	0.51	2	4.26 1942	Nil (d)	2.78 21/42	0.2
October . . . . .	27.7	68	72	60	1.98	5	13.34 1954	Nil (d)	3.74 18/56	0.0
November . . . . .	29.3	70	75	62	4.96	11	15.72 1938	0.40 1870	4.73 9/51	0.0
December . . . . .	30.5	75	83	65	9.55	16	22.94 1965	0.98 1934	7.87 28/10	0.0
Year { Totals . . . . .	..	..	..	..	60.48	97	..	..	..	2.4
Averages . . . . .	25.9	71	..	..	..	..	..	..	..	..
Extremes . . . . .	..	..	89	47	..	..	28.23 ..	Nil (e)	11.67 ..	..
							2/1956(f)		7/1897	

(a) 1882 to 1938 at Post Office. (b) 1869 to 1962 at Post Office, eight years missing. (c) The figures below are the highest or lowest recorded at either the Post Office or Aerodrome sites. (d) Various years. (e) April to October, various years. (f) 30.65 inches were recorded February 1967 at Darwin Regional Office. Records from this office will be incorporated in future tables.

Figures such as 2/82, 26/42, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.

## CLIMATOLOGICAL DATA: ADELAIDE, SOUTH AUSTRALIA

(Lat. 34° 56' S., Long 138° 35' E. Height above M.S.L. 140 ft)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 75 ft)				Prevailing direction		Mean amt evapo- ration (in)	No. days thunder	Mean amt clouds		No. clear days
		Average miles per hour	Highest mean speed in one day (mph)	High- est gust speed (mph)	9 a.m.					3 p.m.	9 a.m., 3 p.m., 9 p.m. (a)	
No. of years of obser- vations	113	18(b)	18(b)	53	30(c)	30(c)	95(d)	98	102	55		
January	1,013.2	7.8	18.2	3/55	72	SW	9.29	1.5	2.9	12.4		
February	1,014.3	7.4	17.8	25/67	66	NE	7.52	1.0	3.0	10.8		
March	1,017.2	6.9	19.1	24/64	78	S	6.26	0.8	3.2	10.8		
April	1,019.9	6.9	23.2	10/56	81	NE	3.78	1.0	4.1	6.6		
May	1,020.1	7.0	23.5	19/53	70	NE	2.30	1.0	4.7	4.6		
June	1,019.8	7.3	18.4	12/53	67	NE	1.47	0.9	5.0	4.0		
July	1,020.0	7.2	20.4	13/64	92	NE	1.47	0.8	4.8	3.6		
August	1,019.1	7.8	23.7	8/55	75	NE	2.09	1.1	4.2	4.9		
September	1,017.6	8.0	21.7	16/65	69	NNE	3.18	1.4	4.3	5.8		
October	1,016.0	8.3	22.0	1/68	75	NNE	5.03	1.9	4.2	5.7		
November	1,015.1	8.4	22.5	14/68	81	SW	6.78	2.0	3.9	6.6		
December	1,013.3	8.2	17.9	6/52	75	SW	8.62	1.5	3.4	9.0		
Year { Totals							57.79	14.9		84.8		
Year { Averages	1,017.1	7.6				NE			4.0			
Year { Extremes			23.7	92								
			8/8/55									

(a) Scale 0-8. (b) Records taken from a Munro Anemometer 1952-1969. (c) Standard thirty years normal (1931-1960).  
 (d) Measured by Australian tank (1870-1962).

## TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sun- shine				
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass					
No. of years of observations	113	113	113	113	113	54(a)	109	88				
January	85.4	61.5	73.5	117.7	12/39	45.1	21/84	180.0	18/82	36.5	14/79	10.0
February	84.9	61.7	73.3	113.6	12/99	45.5	23/18	170.5	10/00	35.8	23/26	9.2
March	80.5	59.0	69.7	110.5	9/34	43.9	21/33	174.0	17/83	32.1	21/33	7.8
April	72.9	54.6	63.7	98.6	5/38	39.6	15/59	155.0	1/83	28.0	14/63	6.0
May	65.6	50.4	58.0	89.5	4/21	36.9	(b)	148.2	12/79	25.6	19/28	4.8
June	60.5	46.9	53.7	78.1	4/57	32.5	(c)	138.8	18/79	21.0	24/44	4.2
July	58.9	44.9	51.9	74.0	11/06	32.0	24/08	134.5	26/90	22.1	30/29	4.3
August	61.6	46.0	53.8	85.0	31/11	32.3	17/59	140.0	31/92	22.8	11/29	5.3
September	66.1	48.1	57.1	95.1	30/61	32.7	4/58	160.5	23/82	25.0	25/27	6.1
October	71.8	51.5	61.7	102.9	21/22	36.1	20/58	162.0	30/21	26.6	22/66	7.2
November	77.5	55.2	66.3	113.5	21/65	40.8	2/09	166.9	20/78	31.5	2/09	8.5
December	82.2	58.8	70.5	114.6	29/31	43.0	(d)	175.7	7/99	32.5	4/84	9.4
Year { Averages	72.3	53.2	62.7	117.7	..	32.0	..	180.0	..	21.0	..	6.9
Year { Extremes	..	..	..	12/1/39	24/7/08	18/1/1882	24/6/44	..	..	..	..	..

(a) Records incomplete 1931-1934. Discontinued 1934. (b) 26/1895 and 24/1904. (c) 27/1876 and 24/1944. (d) 16/1861 and 4/1906.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog Mean No. days	
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day		
No. of years of observa- tions . . . . .	102	102	102	102	131	131	131	131	131	70	
January . . . . .	11.9	40	59	29	0.76	4	3.31	1941	Nil (a)	2.30 2/89	0.0
February . . . . .	12.3	43	57	30	0.79	4	6.09	1925	Nil (a)	5.57 7/25	0.0
March . . . . .	11.7	47	62	29	0.94	5	4.59	1878	Nil (a)	3.50 5/78	0.0
April . . . . .	11.3	56	72	37	1.71	10	5.81	1938	Nil 1945	3.15 5/60	0.0
May . . . . .	10.8	67	76	49	2.72	13	7.75	1875	0.10 1934	2.75 1/53	0.4
June . . . . .	9.9	75	84	63	2.87	15	8.58	1916	0.23 1958	2.11 1/20	1.1
July . . . . .	9.4	76	87	66	2.61	16	5.44	1890	0.39 1899	1.75 10/65	1.3
August . . . . .	9.7	70	78	54	2.43	16	6.20	1852	0.33 1944	2.23 19/51	0.6
September . . . . .	9.9	60	72	44	2.00	13	5.83	1923	0.27 1951	1.59 20/23	0.2
October . . . . .	10.3	51	67	29	1.73	11	5.24	1949	0.04 1969	2.24 16/08	0.0
November . . . . .	10.5	44	58	31	1.21	8	4.45	1839	0.05 1967	2.96 12/60	0.0
December . . . . .	11.1	40	56	31	1.04	6	3.98	1861	Nil 1904	2.42 23/13	0.0
Year { Totals . . . . .	..	..	..	..	20.81	121	..	..	..	..	3.6
Year { Averages . . . . .	10.7	56	..	..	..	..	..	..	..	..	..
Year { Extremes . . . . .	..	..	87	29	..	..	8.58	..	Nil (b)	5.57 7/2/25	..
							6/1916				

(a) Various years. (b) December to April, various years.

Figures such as 3/55, 21/84, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.

## CLIMATOLOGICAL DATA: BRISBANE, QUEENSLAND

(Lat. 27° 28' S., Long. 153° 2' E. Height above M.S.L. 134 ft)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 105 ft)				Mean amt evaporation (in)		No. days thunder	Mean amt clouds		No. clear days
		Average miles per hour	Highest mean speed in one day (mph)	Highest gust speed (mph)	Prevailing direction	9 a.m.	3 p.m.		9 a.m., 3 p.m., 9 p.m. (a)		
No. of years of observations	83	54	54	54	30(b)	30(b)	61	83	78	62	
January	1,011.7	7.7	19.7	23/47	SE	NE	6.95	4.6	4.6	3.4	
February	1,012.5	7.5	23.2	21/54	SE	NE	5.52	3.8	4.7	2.4	
March	1,014.7	7.2	20.3	1/29	S	E	5.26	2.2	4.3	5.5	
April	1,017.3	6.5	16.7	3/25	S	E	4.34	1.5	3.6	7.9	
May	1,018.4	6.2	17.9	17/26	SW	SE	3.41	0.6	3.3	9.9	
June	1,018.5	6.3	19.0	14/28	SW	W & SW	2.74	0.5	3.3	10.3	
July	1,018.7	6.1	22.0	13/54	SW	W & SW	2.94	0.4	2.9	13.2	
August	1,018.9	6.3	14.8	4/35	SW	NE	3.78	1.5	2.6	13.5	
September	1,017.5	6.5	16.1	1/48	SW	NE	4.63	2.8	2.7	12.7	
October	1,015.9	6.9	15.7	1/41	S	NE	5.84	4.4	3.4	8.5	
November	1,014.2	7.3	15.5	10/28	SE & N	NE	6.57	5.7	3.9	6.1	
December	1,012.0	7.5	19.5	15/26	SE	NE	7.25	6.9	4.3	4.2	
Year { Totals							59.23	34.9		97.6	
Year { Averages	1,015.9	6.8			SW	NE			3.6		
Year { Extremes			23.2	79							
			21/2/54								

(a) Scale 0-8. (b) Standard thirty years normal (1911-1940).

## TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	83	83	83	83	83	50(a)	82	61
January	84.9	68.9	76.9	109.8	26/40	58.8	4/93	7.6
February	84.2	68.7	76.5	105.7	21/25	58.5	23/31	7.1
March	82.1	66.6	74.3	101.8	13/65	52.4	29/13	6.8
April	78.8	61.6	70.2	95.2	(b)	44.4	25/25	7.1
May	73.6	55.6	64.6	90.3	21/23	40.6	30/51	6.8
June	69.4	51.3	60.3	88.9	19/18	36.3	29/08	6.5
July	68.4	48.9	58.8	84.3	23/46	36.1	(c)	7.1
August	71.2	50.2	60.7	91.0	14/46	36.9	13/64	7.9
September	75.2	54.8	65.0	100.9	22/43	40.7	1/96	8.3
October	79.0	60.1	69.6	105.3	30/58	43.3	3/99	8.3
November	82.0	64.3	73.2	106.1	18/13	48.5	2/05	8.3
December	84.5	67.4	75.8	105.9	26/93	56.3	5/55	8.1
Year { Averages	77.8	59.9	68.8					7.5
Year { Extremes				109.8	36.1	169.0	23.9	
				26/1/40		(c)		
						2/1/37	11/7/1890	

(a) From 1887 to March 1947, excluding 1927 to 1936. (b) 9/1896 and 5/1903. (c) 12/1894 and 2/1896.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pressure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog Mean No. days
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly	
No. of years of observations	64(a)	83	82	82	118	110	117(b)	117(b)	83
January	21.7	66	79	53	6.28	13	27.72	1895	0.5
February	22.0	69	82	55	6.30	13	40.39	1893	0.6
March	20.9	71	85	56	5.74	15	34.04	1870	1.2
April	17.5	71	80	56	3.46	12	15.28	1867	2.3
May	14.3	71	85	59	2.75	9	13.85	1876	3.2
June	12.1	72	84	54	2.80	8	25.49	1967	3.0
July	11.1	70	88	53	2.18	7	9.10	1965	3.1
August	11.7	67	80	53	1.88	7	14.67	1879	3.6
September	13.8	63	76	47	1.93	8	5.43	1886	2.6
October	16.0	60	72	48	2.74	9	11.41	1949	1.2
November	18.1	59	72	45	3.65	10	12.40	1917	0.5
December	20.1	61	70	51	5.05	12	17.36	1942	0.4
Year { Totals					44.76	123			22.2
Year { Averages	16.6	67							
Year { Extremes			88	45			40.39	Nil (e)	
							2/1893		21/1/1887

(a) All records up to and including 1950. (b) Records incomplete for various years between 1846 and 1859. (c) 1841 and 1951. (d) 1862, 1869, and 1880. (e) Various months in various years.

Figures such as 23/47, 4/93, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.



## CLIMATOLOGICAL DATA: SYDNEY, NEW SOUTH WALES

(Lat. 33° 52' S., Long. 151° 12' E. Height above M.S.L. 138 ft)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 58 ft)				Mean amt evapo- ration (in)	No. days thun- der	Mean amt clouds 9 a.m., 3 p.m., 9 p.m. (a)	No. clear days		
		Aver- age miles per hour	Highest mean speed in one day (mph)	High- est gust speed (mph)	Prevailing direction						
					9 a.m.	3 p.m.					
No. of years of obser- vations	60	25(b)	25(b)	25(b)	25(b)	25(b)	86	50	108	59	
January	1,012.7	7.6	18.8	10/49	93	NE	NE	5.32	3.3	4.7	5.0
February	1,014.0	7.2	18.8	18/57	63	NE	ENE	4.20	2.6	4.8	4.7
March	1,016.4	6.5	20.7	10/44	58	WNW	ENE	3.65	1.7	4.4	5.8
April	1,018.2	6.3	22.5	24/44	72	W	ENE	2.71	1.4	4.1	7.3
May	1,018.6	6.5	21.0	18/55	63	W	ENE	1.93	1.0	3.9	7.8
June	1,018.9	7.2	22.4	10/47	84	W	WSW	1.49	0.8	4.0	8.1
July	1,018.4	7.1	21.3	20/51	66	W	WSW	1.56	0.9	3.5	10.5
August	1,017.9	7.5	24.6	9/51	68	WNW	WNW	2.02	1.5	3.3	10.4
September	1,017.0	7.2	21.8	23/42	70	WNW	NE	2.75	1.9	3.5	9.1
October	1,015.1	7.6	24.5	1/57	95	WNW	ENE	3.91	2.9	4.1	6.6
November	1,013.4	7.7	19.8	21/54	71	WNW	ENE	4.70	3.7	4.5	5.5
December	1,012.0	7.6	22.5	11/52	75	NE	ENE	5.38	4.0	4.6	4.9
Year { Totals	..	..	..	..	..	..	..	39.62	25.7	..	85.8
Year { Averages	1,016.1	7.2	..	..	..	WNW	ENE	..	..	4.2	..
Year { Extremes	..	..	24.6	95	..	..	..	..	..	..	..
			9/8/51								

(a) Scale 0-8. (b) Years 1938-1962 inclusive.

## TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sun- shine				
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass					
No. of years of observations	111	111	111	111	111	84(a)	111	49				
January	78.2	65.0	71.6	113.6	14/39	51.1	18/49	164.3	26/15	43.7	6/25	7.2
February	77.8	65.2	71.5	107.8	8/26	49.3	28/63	168.3	14/39	42.8	22/33	6.6
March	76.1	63.2	69.6	102.6	3/69	48.8	14/86	158.3	10/26	39.9	17/13	6.3
April	71.8	58.1	64.9	91.4	(b)	44.6	27/64	144.1	10/77	33.3	24/09	6.1
May	66.2	52.2	59.2	86.0	1/19	40.2	22/59	129.7	1/96	29.3	25/17	5.8
June	61.8	48.4	55.1	80.4	11/31	35.7	22/32	125.5	2/23	28.0	22/32	5.2
July	60.5	46.1	53.3	78.3	22/26	35.9	12/90	124.7	19/77	24.0	4/93	6.1
August	63.3	47.7	55.5	86.8	24/54	36.8	3/72	149.0	30/78	26.1	4/09	6.6
September	67.3	51.4	59.3	94.2	26/65	40.8	2/45	142.2	12/78	30.1	17/05	7.2
October	71.4	55.9	63.7	99.4	4/42	42.2	6/27	152.2	20/33	32.7	9/05	7.3
November	74.4	59.6	67.0	104.5	6/46	45.8	1/05	158.5	28/99	35.4	21/67	7.6
December	76.9	62.9	69.9	108.0	20/57	48.4	3/24	164.5	27/89	41.4	3/24	7.4
Year { Averages	70.5	56.3	63.4	..	..	..	..	..	..	..	..	6.6
Year { Extremes	..	..	..	113.6	35.7	168.3	24.0	..	..	..	..	..
				14/1/39	22/6/32	14/2/39	4/7/1893					

(a) Records discontinued 1946. (b) 1/36 and 10/69.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog Mean No. days			
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day				
No. of years of observa- tions	94	94	94	94	111	111	111	111	111	49			
January	18.7	68	78	58	3.72	13	15.26	1911	0.25	1932	7.08	13/11	0.3
February	19.3	70	81	60	4.43	13	22.22	1956	0.12	1939	8.90	25/73	0.7
March	18.4	74	85	62	5.00	14	20.52	1942	0.42	1876	11.05	28/42	1.6
April	15.0	74	87	63	5.05	13	24.49	1861	0.06	1868	7.52	29/60	2.3
May	12.1	77	90	63	4.93	13	23.03	1919	0.14	1957	8.36	28/89	3.3
June	10.3	75	89	63	5.21	12	25.30	1950	0.16	1962	5.17	16/84	2.7
July	9.3	74	88	59	4.26	11	13.23	1950	0.10	1946	7.80	7/31	2.2
August	9.6	69	84	54	3.18	11	14.89	1899	0.04	1885	5.33	2/60	1.9
September	11.3	65	79	49	2.73	11	14.05	1879	0.08	1882	5.69	10/79	1.0
October	13.1	62	77	46	2.96	12	11.13	(a)	0.21	1867	6.37	13/02	0.6
November	15.0	62	79	42	3.07	12	20.36	1961	0.07	1915	5.24	27/55	0.5
December	17.4	65	77	51	3.09	12	15.82	1920	0.23	1913	4.75	13/10	0.4
Year { Totals	..	..	..	..	47.63	147	..	..	..	..	..	..	17.5
Year { Averages	14.1	69	..	..	..	..	..	..	..	..	..	..	..
Year { Extremes	..	..	90	42	..	..	25.30	..	0.04	..	11.05	..	..
							6/1950		8/1885		28/3/42		

(a) 1916 and 1959.

Figures such as 10/49, 28/63, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.

CLIMATOLOGICAL DATA: CANBERRA, AUSTRALIAN CAPITAL TERRITORY  
(Lat. 35° 19' S., Long. 149° 11' E. Height above M.S.L., 1,872 ft)  
BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	No. of years of obser- vations	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 33 ft)				Prevailing direction		Mean amt evapora- tion (in)	No. days thun- der	Mean amt clouds		No. clear days
			Average miles per hour	Highest mean speed in one day (mph)	High- est gust speed (mph)	9 a.m. 3 p.m.		9 a.m., 3 p.m., 9 p.m. (a)					
January	31	1,012.2	4.2	14.9	23/33	65	NW	NW	7.77	3.2	4.0	8.0	
February	31	1,012.9	3.8	15.3	24/33	65	NW	NW	6.12	2.8	4.2	6.9	
March	31	1,016.0	3.3	18.2	28/42	69	SE	NW	5.13	1.5	4.1	8.3	
April	31	1,018.7	3.1	18.6	8/45	66	NW	NW	3.14	0.9	4.1	7.1	
May	31	1,018.8	2.7	13.2	27/58	65	NW	NW	1.89	0.5	4.4	6.8	
June	31	1,020.9	3.0	16.1	2/30	60	NW	NW	1.24	0.2	4.6	6.7	
July	31	1,020.3	3.1	23.4	7/31	63	NW	NW	1.23	0.1	4.4	7.2	
August	31	1,018.8	3.7	15.7	25/36	70	NW	NW	1.75	0.7	4.3	7.1	
September	31	1,017.3	3.7	17.4	28/34	62	NW	NW	2.78	1.2	4.1	8.0	
October	31	1,015.0	4.0	14.7	12/57	74	NW	NW	4.26	2.0	4.4	6.2	
November	31	1,012.0	4.3	17.2	28/42	79	NW	NW	5.71	3.3	4.4	5.9	
December	31	1,010.9	4.3	16.1	11/38	66	NW	NW	7.22	3.5	4.1	7.5	
Year	Totals	1,016.1	3.6	..	..	..	NW	NW	48.24	19.9	..	85.7	
	Averages	..	..	..	..	..	..	..	..	..	..	..	
	Extremes	..	..	23.4	7/7/31	79	..	..	..	..	4.3	7.1	

(a) Scale 0-8. (b) Recorded at Forestry and Timber Bureau, Yarralumla, where a cup anemometer is installed. (c) Recorded at Meteorological Office, R.A.A.F. Fairbairn, where a Dines Pressure Tube anemometer is installed. (d) Australian tank, Yarralumla, 1929-66. (e) 1940-70. Formerly assessed over 37-year period at Yarralumla.

TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
January	31	31	31	31	31	31	19	33
February	81.8	55.0	68.4	(a) 106.6	31/68	35.3	1/56	9.1
March	80.0	54.6	67.3	108.0	1/68	37.4	16/62	8.3
April	76.0	50.7	63.3	97.6	9/40	30.1	24/67	7.5
May	67.3	43.7	55.5	90.7	12/68	27.0	24/69	6.9
June	58.5	36.9	47.7	76.1	10/67	18.8	16/57	5.5
July	53.5	33.7	43.6	68.2	3/57	16.7	8/57	4.6
August	51.7	31.5	41.6	61.4	(c)	16.3	5/57	5.1
September	54.6	33.4	44.0	71.0	24/54	18.1	11/69	6.0
October	60.3	36.8	48.5	83.4	26/65	22.0	5/40	7.4
November	66.2	42.3	54.3	90.8	13/46	26.0	4/57	8.0
December	72.1	46.7	59.5	101.8	19/44	28.8	28/67	8.8
Year	78.5	51.8	65.1	101.9	21/53	34.0	18/64	9.9
	Averages	66.7	43.1	54.9	..	..	..	7.2
	Extremes	..	..	..	108.0	16.3	9.0	..
					1/2/68	5/7/57	(d)	..

(a) A temperature of 109.0 was recorded at the former Acton station on 11.1.39. (b) 30/58 and 24/67. (c) 2/46 and 9/54. (d) 11/8/69 and 16/7/70.

HUMIDITY, RAINFALL, AND FOG

Month	Vapour pressure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog Mean No. days
		Mean	Highest mean	Lowest mean	Mean mthly	No. of days of rain	Greatest monthly	Least monthly	
January	31(a)	31	31	31	31	31	31	31	31
February	13.1	58	75	42	2.27	8	6.46	1941	0.6
March	13.8	65	81	53	2.09	7	5.70	1948	0.8
April	12.5	67	81	53	2.11	7	12.29	1950	1.7
May	10.3	73	84	38	1.97	7	6.06	1940	2.6
June	8.4	83	96	73	2.09	9	5.89	1953	6.9
July	7.1	85	97	73	1.58	10	4.96	1956	7.0
August	6.6	83	93	68	1.49	11	4.07	1960	6.9
September	7.0	78	92	58	1.70	12	4.18	1955	4.0
October	8.2	72	82	55	1.96	10	4.55	1970	2.7
November	9.7	66	82	50	2.75	11	5.81	1959	2.0
December	10.4	57	76	38	2.44	9	5.31	1961	0.6
Year	11.9	56	74	43	2.33	8	6.31	1960	0.1
	Totals	..	..	..	24.78	109	..	..	35.9
	Averages	9.9	69	97	..	..	12.29	3/50	..
	Extremes	..	..	..	..	..	Nil	(b)	..
									21/10/59

(a) Formerly assessed over 38-year period at Forestry and Timber Bureau, Yarralumla. (b) 12/67 and 2/68.  
Data shown in the above tables relate to the Meteorological Office, R.A.A.F., Fairbairn, except where otherwise indicated, and cover years up to 1964. Figures such as 23/33, 31/68, etc. indicate, in respect of the month of reference, the day and year of the occurrence.

## CLIMATOLOGICAL DATA: MELBOURNE, VICTORIA

(Lat. 37° 49' S., Long. 144° 58' E. Height above M.S.L., 114 ft)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 93 ft)					Mean amt evapo- ration (in)	No. days thun- der	Mean amt clouds		No. clear days
		Aver- age miles per hour	Highest mean speed in one day (mph)	High- est gust speed (mph)	Prevailing direction	9 a.m. 3 p.m.			9 a.m., 3 p.m., 9 p.m. (a)		
No. of years of obser- vations	114	30(b)	57	60	51	51	94(c)	62	113	62	
January	1,012.8	8.3	21.1 27/41	66	S	S	6.49	1.7	4.1	6.7	
February	1,014.2	8.1	19.0 13/47	74	S & SW	S	5.08	2.0	4.0	5.9	
March	1,016.8	7.3	18.0 3/61	66	N	S	4.12	1.3	4.4	5.4	
April	1,019.0	7.0	19.9 16/43	67	N	S	2.50	0.7	4.8	4.1	
May	1,019.1	7.3	20.5 4/61	72	N	N & S	1.55	0.4	5.2	2.9	
June	1,018.9	7.3	22.8 16/47	64	N	N	1.15	0.2	5.3	2.8	
July	1,018.6	8.0	22.7 22/60	68	N	N	1.13	0.2	5.1	2.6	
August	1,017.7	7.8	21.3 20/42	65	N	N & S	1.52	0.6	5.0	2.8	
September	1,016.0	8.0	21.1 15/64	69	N	S	2.36	0.8	4.8	3.6	
October	1,014.8	8.1	18.9 6/68	71	SW	S	3.40	1.6	4.8	3.5	
November	1,013.9	8.5	21.2 13/58	71	SW	S	4.52	2.0	4.9	3.1	
December	1,012.4	8.4	21.0 12/52	61	S & SW	S	5.78	2.2	4.5	4.4	
Year { Totals			..	..	..	..	39.60	13.7	..	47.8	
Year { Averages	1,016.2	7.8	..	..	N	S	..	..	4.7	..	
Year { Extremes	..	..	22.8	74	..	..	..	..	..	..	
16/6/47											

(a) Scale 0-8.

(b) Early records not comparable.

(c) Records to 1966.

## TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sun- shine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	114	114	114	114	114	86(a)	110	52(c)
January	78.5	56.9	67.7	114.1 13/39	42.0 28/85	178.5 14/62	30.2 28/85	8.1
February	78.1	57.4	67.8	109.5 7/01	40.2 24/24	167.5 15/70	30.9 6/91	7.5
March	74.8	55.0	64.9	107.0 11/40	37.1 17/84	164.5 1/68	28.9 (b)	6.6
April	68.1	50.8	59.4	94.8 5/38	34.8 24/88	152.0 8/61	25.0 23/97	5.1
May	61.6	46.9	54.3	83.7 7/05	29.9 29/16	142.6 2/59	21.1 26/16	3.9
June	56.9	43.9	50.4	72.3 2/57	28.0 11/66	129.0 11/61	19.9 30/29	3.4
July	55.8	42.1	49.0	69.3 22/26	27.0 21/69	125.8 27/80	20.5 12/03	3.7
August	58.6	43.4	51.0	77.0 20/85	28.3 11/63	137.4 29/69	21.3 14/02	4.6
September	62.8	45.6	54.2	88.6 28/28	31.0 3/40	142.1 20/67	22.8 8/18	5.5
October	67.1	48.5	57.8	98.4 24/14	32.1 3/71	154.3 28/68	24.8 22/18	5.9
November	71.3	51.4	61.4	105.7 27/94	36.5 2/96	159.6 29/65	24.6 2/96	6.5
December	75.4	54.5	65.0	110.7 15/76	40.0 4/70	170.3 20/69	33.2 1/04	7.3
Year { Averages	67.4	49.7	58.6	114.1	27.0	178.5	19.9	5.7
Year { Extremes	..	..	..	114.1	27.0	178.5	19.9	5.7
				13/1/39	21/7/1869	14/1/1862	30/6/29	

(a) Records discontinued 1945.

(b) 17/1884 and 20/1897.

(c) Discontinued 1967.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pres- sure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog Mean No. days	
		Mean	Highest mean	Lowest mean	Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day
No. of years of observa- tions	62	62	62	62	114	114	114	114	112	
January	13.0	60	68	50	1.86	8	6.92 1963	0.01 1932	4.25 29/63	0.1
February	14.1	63	77	48	1.86	7	7.72 1939	0.02 1965	3.44 26/46	0.3
March	13.3	66	79	50	2.09	9	7.50 1911	0.14 1934	3.55 5/19	0.7
April	11.7	72	82	66	2.32	11	7.67 1960	Nil 1923	3.15 23/60	1.8
May	10.3	79	88	70	2.25	14	5.60 1942	0.14 1934	1.81 18/00	3.7
June	9.3	83	92	73	1.98	14	4.50 1859	0.31 1858	1.71 21/04	4.7
July	8.9	81	86	75	1.93	15	7.02 1891	0.57 1902	2.93 12/91	4.4
August	9.1	75	82	65	1.94	15	4.35 1939	0.48 1903	2.14 17/81	2.4
September	9.5	68	76	60	2.32	14	7.93 1916	0.52 1907	2.31 23/16	0.9
October	10.5	63	71	52	2.65	14	7.61 1869	0.29 1914	2.40 21/53	0.4
November	11.3	60	69	52	2.30	12	8.11 1954	0.25 1895	2.86 21/54	0.2
December	12.5	59	69	48	2.28	10	7.18 1863	0.11 1904	3.92 4/54	0.2
Year { Totals					25.78	143				19.8
Year { Averages	11.1	69								
Year { Extremes			92	48			8.11	Nil	4.25	
11/1954 4/1923 29/1/63										

Figures such as 27/41, 28/85, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.



## CLIMATOLOGICAL DATA: HOBART, TASMANIA

(Lat. 42° 53' S., Long. 147° 20' E. Height above M.S.L. 177 ft)

## BAROMETER, WIND, EVAPORATION, THUNDER, CLOUDS, AND CLEAR DAYS

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 40 ft)				Mean amt evaporation (in)	No. days thunder	Mean amt clouds		No. clear days
		Average miles per hour	Highest mean speed in one day (mph)	Highest gust speed (mph)	Prevailing direction			9 a.m.	3 p.m.	
No. of years of observations	84	59	59	79	30(b)	30(b)	56	58	84	30(b)
January	1,010.6	7.7	20.8	30/16	NNW	SSE	4.91	1.0	5.1	1.9
February	1,012.9	7.0	25.2	4/27	NNW	SSE	3.74	1.0	5.0	2.3
March	1,014.4	6.7	21.4	13/38	WN	SSE	3.20	0.7	4.8	2.4
April	1,015.7	6.7	24.1	3/52	NW	W	2.06	0.4	5.1	1.7
May	1,015.3	6.4	22.0	21/65	NNW	NW	1.38	Nil	5.0	2.4
June	1,015.4	6.3	23.7	27/20	NW	NW	0.93	0.1	5.0	2.4
July	1,014.0	6.5	22.9	22/53	NNW	NNW	0.93	Nil	4.8	2.0
August	1,012.7	6.8	25.5	19/26	NNW	NW	1.29	0.1	4.9	2.1
September	1,011.8	7.7	26.7	28/65	NNW	NW	2.00	0.1	4.9	1.5
October	1,010.6	7.8	20.2	3/65	NNW	SW	2.94	0.4	5.3	1.0
November	1,009.9	8.0	21.2	18/15	NNW	S	3.75	0.6	5.4	1.3
December	1,009.5	7.6	23.4	1/34	NNW	SSE	4.40	0.8	5.4	1.1
Year { Totals	1,012.7	7.1	..	..	NNW	W	31.53	5.2	5.1	22.1
Year { Averages	..	..	26.7	93	..	..	..	..	..	..
Year { Extremes	..	..	28/9/65	..	..	..	..	..	..	..

(a) Scale 0-8. (b) Standard thirty years normal (1911-1940).

## TEMPERATURE AND SUNSHINE

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme temperature (°Fahr.)		Mean daily hours sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun	Lowest on grass	
No. of years of observations	86	86	86	86	86	57(a)	82	74
January	70.5	52.6	61.5	105.0	40.1	160.0	30.6	19/97
February	70.6	53.0	61.8	104.4	12/99	165.0	28.3	1/87
March	67.9	50.9	59.4	99.1	13/40	150.9	27.5	30/02
April	62.6	47.5	55.0	87.1	1/41	142.0	25.0	1/86
May	57.5	44.0	50.7	77.8	5/21	128.0	20.0	19/02
June	53.1	41.2	47.1	69.2	1/07	122.0	18.1	24/63
July	52.5	39.9	46.2	66.1	14/34	121.0	18.7	16/86
August	55.1	41.1	48.1	71.6	28/14	129.0	20.1	7/09
September	58.8	43.1	51.0	81.7	23/26	138.0	18.3	16/26
October	62.3	45.5	53.9	92.0	24/14	156.0	23.8	1/08
November	65.3	48.1	56.7	98.3	26/37	154.0	26.0	1/08
December	68.3	50.8	59.6	105.2	30/97	161.5	27.2	1/86
Year { Averages	62.0	46.5	54.3	105.2	27.7	165.0	18.1	..
Year { Extremes	..	..	..	30/12/1897	11/7/1895	24/2/1868	24/6/63	..

(a) Period 1934-1938 not comparable; records discontinued 1946. (b) 1/1900 and 19/1959. (c) 9/1937 and 11/1937. (d) 5/1886 and 13/1905. (e) —/1899 and —/1893. (f) 1/1886 and 1/1899.

## HUMIDITY, RAINFALL, AND FOG

Month	Vapour pressure mean 9 a.m. (m.bars)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)				Fog Mean No. days
		Mean	Highest mean	Lowest mean	Mean mthly	No. of days of rain	Greatest monthly	Least monthly	
No. of years of observations	76	76	76	76	87	87	87	87	47(a)
January	11.0	58	81	45	1.90	11	5.91	0.17	30/16
February	11.7	62	83	49	1.62	10	6.72	0.11	1/54
March	11.0	65	78	52	1.85	11	10.05	0.29	3/47
April	10.0	70	84	57	2.18	12	9.75	0.07	23/60
May	8.8	75	86	61	1.93	14	8.43	0.14	2/93
June	7.9	78	91	61	2.35	15	9.38	0.28	7/54
July	7.6	78	87	72	2.09	15	6.12	0.17	18/22
August	7.9	73	86	59	1.90	16	6.32	0.30	14/90
September	8.3	66	81	52	2.06	15	7.93	0.38	15/57
October	9.1	62	74	52	2.49	17	7.60	0.39	4/06
November	9.6	58	73	49	2.18	14	7.39	0.33	30/85
December	10.6	58	73	42	2.23	13	7.72	0.17	5/41
Year { Totals	9.5	67	..	..	24.77	163	..	..	4.3
Year { Averages	..	..	91	42	..	..	10.05	0.07	..
Year { Extremes	..	..	..	..	..	..	3/1946	4/1904	15/9/57

(a) 1922-1968. (b) 1915 and 1958.

Figures such as 30/16, 12/99, etc. indicate, in respect of the month of reference, the day and year of the occurrence. Dates in italics relate to nineteenth century.

**Rainfall and temperatures, various cities**

Year Book No. 34, page 28, shows rainfall and temperature, and No. 38, page 42, temperature, for various important cities throughout the world and for the Australian capitals.

**Climatological data for selected Australian country towns**

The following table shows some of the more important climatological data for selected Australian country towns, based on standard thirty years normals (1911-1940).

**CLIMATOLOGICAL DATA FOR SELECTED AUSTRALIAN COUNTRY TOWNS**

Town	Relative humidity									
	Rainfall		Temperature				Average index of	Average index of	Mean 3p.m., January (%)	Mean 3p.m., July (%)
							mean relative humidity(a), January	mean relative humidity(a), July		
	Average annual rainfall (inches)	Average number of wet days	Mean maximum, January (°F.)	Mean maximum, July (°F.)	Mean minimum, January (°F.)	Mean minimum, July (°F.)				
WESTERN AUSTRALIA										
Albany . . .	39.67	172	73.8	60.9	58.5	46.3	73	76	65	70
Broome . . .	22.87	38	91.3	81.8	79.2	57.0	75	52	67	43
Bunbury . . .	33.22	125	82.1	62.5	59.1	47.1	66	78	57	71
Carnarvon . . .	9.01	35	87.2	71.7	72.1	51.6	64	66	61	57
Esperance . . .	26.73	124	76.6	62.1	59.9	45.4	70	77	63	65
Geraldton . . .	18.58	80	84.5	67.7	66.3	51.7	61	68	60	60
Kalgoorlie . . .	9.46	62	93.2	62.5	64.2	42.9	43	66	27	50
Meekatharra . . .	9.17	36	100.4	67.5	73.1	44.0	31	59	21	44
Narrogin . . .	21.38	108	87.3	57.9	56.3	41.3	..	..	..	..
Port Hedland . . .	11.01	20	94.3	79.3	79.4	55.6	67	49	63	47
Wyndham . . .	25.15	55	95.9	85.0	80.2	66.2	66	38	54	35
NORTHERN TERRITORY										
Alice Springs . . .	9.93	31	95.3	66.9	69.8	38.9	33	49	26	32
Tennant Creek . . .	13.85	30	98.5	75.4	75.9	51.1	41	36	27	25
SOUTH AUSTRALIA										
Ceduna . . .	10.50	68	81.5	62.6	58.8	43.8	..	..	..	..
Mount Gambier . . .	26.86	192	74.2	56.2	53.5	42.4	65	79	50	69
Oodnadatta . . .	4.44	20	99.0	66.4	72.1	42.7	27	49	17	34
Port Augusta . . .	9.28	62	89.5	62.8	65.3	43.9	50	66	33	52
Port Lincoln . . .	18.24	119	77.4	60.2	58.5	46.4	64	76	53	70
Port Pirie . . .	12.99	78	89.2	61.7	62.6	45.4	51	72	..	..
QUEENSLAND										
Atherton . . .	53.99	116	83.8	70.9	65.0	50.0	78	79	..	..
Bundaberg . . .	42.37	84	86.1	71.6	69.7	49.2	74	72	63	55
Cairns . . .	86.35	140	89.7	78.1	74.2	61.0	77	74	69	63
Charleville . . .	17.97	49	97.6	68.3	70.8	40.1	44	61	28	39
Charters Towers . . .	23.26	59	92.9	76.0	71.3	51.6	65	64	46	47
Cloncurry . . .	16.89	35	98.7	76.4	76.5	51.5	40	40	30	27
Ipswich . . .	28.97	76	90.4	70.0	67.8	43.8	65	65	..	..
Longreach . . .	15.54	37	99.6	73.2	73.3	44.3	49	56	29	35
Mackay . . .	63.16	116	86.2	71.0	73.6	53.4	80	77	..	..
Maryborough . . .	45.43	122	87.9	71.5	68.8	47.6	73	74	..	..
Normanton . . .	37.56	56	94.3	84.0	77.0	58.6	70	48	52	34
Rockhampton . . .	37.36	93	90.0	73.7	72.3	51.2	68	65	55	45
Roma . . .	20.43	52	94.4	67.4	68.3	39.3	51	64	32	40
Toowoomba . . .	35.19	105	82.7	61.1	61.2	40.7	73	79	..	..
Townsville . . .	43.06	75	87.3	76.0	76.2	59.8	75	64	69	59

For footnotes see next page.

CLIMATOLOGICAL DATA FOR SELECTED AUSTRALIAN COUNTRY TOWNS—*continued*

Town	Rainfall		Temperature				Relative humidity			
							Average index of mean relative humidity(a), January	Average index of mean relative humidity(a), July	Mean 3p.m., January (%)	Mean 3p.m., July (%)
	Average annual rainfall (inches)	Average number of wet days	Mean maximum, January (°F.)	Mean maximum, July (°F.)	Mean minimum, January (°F.)	Mean minimum, July (°F.)				
NEW SOUTH WALES										
Albury . . .	27.66	99	89.9	56.4	59.8	38.2	47	74	29	64
Armidale . . .	28.98	107	80.8	54.0	56.5	33.8	60	61	44	57
Bega . . .	35.92	80	81.2	62.9	57.3	34.5	72	70	..	..
Bourke . . .	11.74	44	98.0	63.8	69.3	40.8	37	64	24	48
Broken Hill . . .	9.20	46	90.5	59.5	64.5	41.2	36	67	24	49
Cooma . . .	18.85	88	78.8	50.4	52.2	30.2	55	67	38	56
Dubbo . . .	20.91	72	92.1	59.7	63.8	37.5	48	74	32	56
Goulburn . . .	24.27	112	81.5	52.4	56.2	35.8	59	74	43	67
Grafton . . .	34.68	105	89.1	70.6	67.2	43.9	..	..	..	..
Katoomba . . .	53.17	126	73.9	48.4	54.6	36.7	61	71	54	68
Leeton . . .	15.76	78	88.9	56.8	63.2	38.9	44	76	..	..
Moree . . .	21.43	56	96.0	64.8	67.4	39.0	..	..	..	..
Newcastle . . .	41.36	132	77.7	61.4	66.6	47.7	74	70	69	61
Orange . . .	31.52	95	83.9	51.6	53.7	31.4	..	..	..	..
Tamworth . . .	24.41	67	91.0	60.4	63.4	36.8	..	..	..	..
Taree . . .	47.48	110	83.9	64.5	62.0	42.7	..	..	..	..
Wagga . . .	21.42	86	89.8	57.1	61.5	37.8	50	77	31	65
Wollongong . . .	44.04	112	78.4	61.7	62.6	47.1	78	71	..	..
VICTORIA										
Ballarat . . .	27.38	170	75.7	49.8	50.5	38.4	60	81	41	75
Bendigo . . .	20.27	111	83.0	54.2	56.5	39.4	47	75	30	64
Geelong . . .	21.32	133	76.2	56.5	55.4	42.0	65	81	52	70
Horsham . . .	17.57	104	85.1	56.0	55.2	38.8	50	77	33	67
Mildura . . .	10.37	61	89.8	59.5	61.0	40.5	48	71	..	..
Sale . . .	23.70	128	77.5	56.8	54.4	38.6	65	79	51	68
Seymour . . .	22.17	94	84.7	55.2	54.6	37.4	56	79	..	..
Shepparton . . .	19.94	103	86.3	55.7	58.8	39.3	49	77	32	63
Wangaratta . . .	25.57	104	86.7	55.2	58.5	38.1	41	75	26	66
Warrnambool . . .	25.79	153	69.9	55.6	54.7	43.6	73	83	69	77
TASMANIA										
Burnie . . .	38.99	170	67.6	53.7	51.9	41.7	70	82	65	74
Launceston . . .	28.56	149	75.8	53.7	52.1	36.9	60	77	..	..
Zeehan . . .	94.06	246	66.3	51.6	48.0	38.2	73	81	61	74

(a) The average index of mean relative humidity has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the average mean temperature of the month. Being thus related to the mean temperature this value of relative humidity is a good approximation to the daily mean.

The table on the next page gives the latitude, longitude, and altitude of the weather recording station at each of the above towns.



## LOCATION CO-ORDINATES FOR SELECTED AUSTRALIAN COUNTRY TOWNS

Station	Lat.	Long.	Altitude (ft)	Station	Lat.	Long.	Altitude (ft)
<b>Western Australia—</b>				<b>Queensland—contd</b>			
Albany . . .	34° 57'	117° 48'	226	Toowoomba . . .	27° 33'	151° 57'	1,921
Broome . . .	17° 57'	122° 13'	39	Townsville . . .	19° 15'	146° 46'	10
Bunbury . . .	33° 19'	115° 38'	3	<b>New South Wales—</b>			
Carnarvon . . .	24° 53'	113° 39'	12	Albury . . .	36° 06'	146° 54'	600
Esperance . . .	33° 51'	121° 53'	14	Armidale . . .	30° 32'	151° 38'	3,215
Geraldton . . .	28° 48'	114° 42'	92	Bega . . .	36° 40'	149° 50'	50
Kalgoorlie . . .	30° 46'	121° 27'	1,180	Bourke . . .	30° 05'	145° 58'	350
Meekatharra . . .	26° 36'	118° 29'	1,697	Broken Hill . . .	31° 57'	141° 28'	978
Narrogin . . .	32° 54'	117° 09'	1,150	Cooma . . .	36° 13'	149° 08'	2,749
Port Hedland . . .	20° 23'	118° 37'	20	Dubbo . . .	32° 10'	148° 37'	861
Wyndham . . .	15° 31'	128° 09'	20	Goulburn . . .	34° 45'	149° 43'	2,074
<b>Northern Territory—</b>				Grafton . . .	29° 41'	152° 56'	21
Alice Springs . . .	23° 48'	133° 53'	1,790	Katoomba . . .	33° 43'	150° 19'	3,280
Tennant Creek . . .	19° 38'	134° 11'	1,229	Leeton . . .	34° 33'	146° 24'	496
<b>South Australia—</b>				Moree . . .	29° 28'	149° 51'	680
Ceduna . . .	32° 08'	133° 42'	57	Newcastle . . .	32° 55'	151° 49'	122
Mount Gambier . . .	37° 45'	140° 47'	206	Orange . . .	33° 18'	149° 06'	2,850
Oodnadatta . . .	27° 33'	135° 29'	371	Tamworth . . .	31° 05'	150° 56'	1,279
Port Augusta . . .	32° 33'	137° 47'	14	Taree . . .	31° 54'	152° 28'	30
Port Lincoln . . .	34° 47'	135° 53'	13	Wagga . . .	35° 08'	147° 25'	719
Port Pirie . . .	33° 11'	138° 01'	10	Wollongong . . .	34° 25'	150° 56'	150
<b>Queensland—</b>				<b>Victoria—</b>			
Atherton . . .	17° 17'	145° 27'	2,466	Ballarat . . .	37° 35'	143° 50'	1,433
Bundaberg . . .	24° 52'	152° 21'	6	Bendigo . . .	36° 46'	144° 17'	730
Cairns . . .	16° 35'	145° 44'	10	Geelong . . .	38° 07'	144° 22'	57
Charleville . . .	26° 25'	146° 17'	950	Horsham . . .	36° 40'	142° 12'	437
Charters Towers . . .	20° 03'	146° 08'	1,004	Mildura . . .	34° 14'	142° 05'	156
Cloncurry . . .	20° 40'	140° 30'	621	Sale . . .	38° 06'	147° 08'	15
Ipswich . . .	27° 38'	152° 44'	64	Seymour . . .	37° 02'	145° 08'	464
Longreach . . .	23° 26'	144° 15'	612	Shepparton . . .	36° 23'	145° 24'	372
Mackay . . .	21° 07'	149° 10'	9	Wangaratta . . .	36° 22'	146° 19'	493
Maryborough . . .	25° 32'	152° 42'	20	Warrnambool . . .	38° 24'	142° 29'	33
Normanton . . .	17° 39'	141° 05'	34	<b>Tasmania—</b>			
Rockhampton . . .	23° 23'	150° 29'	26	Burnie . . .	41° 04'	145° 54'	13
Roma . . .	26° 36'	148° 42'	1,000	Launceston . . .	41° 33'	147° 13'	546
				Zeehan . . .	41° 54'	145° 23'	592

**The weather of 1970 (December 1969 to November 1970)**

The following is a brief summary of weather experienced during the four seasons ended in November 1970. Plate 4, page 32, shows the rainfall distribution for 1970.

*Summer, 1969-70.* Rainfall was mainly near average in the western and eastern areas of the continent but large areas of South Australia and the Northern Territory were below average. In Western Australia the season's rainfall was mostly above average and the situation in the drought stricken southern districts was eased to some extent. Although much of Queensland received below average rainfall for the summer the rain was beneficial and eased the drought in many areas of that State. In New South Wales rainfall was near average in the east and below average in the west. Victoria's rainfall was mainly near average except in the North Mallee where falls were significantly below average. Tasmania's rainfall was above average in the east and below average in the west.

Summer mean temperatures were near average generally. Some exceptions were in eastern New South Wales and in the south-east of South Australia where seasonal mean maxima were below average.

*Autumn, 1970.* Rainfall was markedly deficient in large areas of Queensland, South Australia and the 'Top End' of the Northern Territory. The season's rainfall was notably above average in Victoria, south-central New South Wales and in the Alice Springs district of the Northern Territory, some areas in the latter district receiving twice their normal amounts.

Elsewhere over the continent and in Tasmania seasonal rainfall was mainly average. In Western Australia the season's rainfall was generally average after a dry beginning. The Northern Territory ranged from deficiencies in the north to good rains in the south. Most of South Australia had deficient seasonal rainfall except in south-eastern areas where falls were mainly average. Autumn rainfall was deficient in Queensland notably in central and south-east districts. About two thirds of New South Wales received average rainfall or above in autumn although east coastal areas were well below. In Victoria, rainfall was well above average throughout, being as high as 85 per cent above in some areas. Tasmania's seasonal rainfall was generally average.

Seasonal temperatures were mainly average but there was a large area over inland New South Wales which was markedly below.

*Winter, 1970.* The absence of depressions off the New South Wales coast caused lack of heavy rain on the coast and drought conditions were established there north from about Jervis Bay. In the wheat-growing areas of northern New South Wales and southern Queensland the acreage sown to wheat was much less than last year because of less than average autumn rainfall and very much less than average winter rainfall. Those crops that were sown were critically in need of rain. In Western Australia the wheat was sown in fair to good conditions but the low rainfall of July and August left crops there in need of rain. Other cereal crops in these areas were in a similar position regarding acreage sown and need of rain at the end of autumn. The situation for cereal crops in South Australia, Victoria and southern New South Wales was greatly improved by good rainfall late in August. In the northern half of Australia winter rainfall was scant and generally very much below average. It was feared that during spring very arduous conditions would spread to all northern areas; many areas were drought-stricken by the end of winter.

Temperatures were mainly average but there were particularly severe frosts in the north-east of New South Wales.

*Spring, 1970.* Rainfall over Australia was generally average or better except for small areas in South Australia and Victoria. However, the average rainfall in the west of Queensland, the far north-west of New South Wales and northern South Australia was not great enough in amount to give appreciable alleviation of drought conditions which had persisted from the beginning of this year or earlier. In the north of the continent spring rains eased the drought situation but much still depended upon the development of the summer rainy season.

Wheat areas in most of the south had either ideal rainfall, or somewhat more than ideal amounts of rainfall. In Queensland and northern New South Wales spring rains, after autumn and winter drought, made reasonable harvests possible in some areas.

Spring temperatures were mainly below normal and some damage was caused by the late frosts. Horticultural conditions were good to excellent although a little late.

## CHAPTER 3

# GENERAL GOVERNMENT

### Parliamentary government

#### Scheme of parliamentary government

Under section 1 of the Commonwealth of Australia Constitution the legislative power of the Commonwealth is vested in the Parliament of the Commonwealth, which consists of the Sovereign, the Senate, and the House of Representatives. The Sovereign is represented throughout the Commonwealth by the Governor-General who, subject to the Constitution of the Commonwealth, has such powers and functions as the Sovereign is pleased to assign to him. In each State there is a State Governor who is the representative of the Sovereign for the State and who exercises such powers within the State as are conferred upon him by the Letters Patent which constitute his office and by the instructions which detail the manner in which his duties are to be fulfilled. The Legislature in each State was bicameral until 1922, when the Queensland Upper House was abolished and the Parliament became unicameral. In the bicameral Parliaments the Upper House is known in the Commonwealth Parliament as the Senate, and in the State Parliaments as the Legislative Council, while the Lower House is known in the Commonwealth Parliament as the House of Representatives, in the State Parliaments of New South Wales, Victoria, and Western Australia as the Legislative Assembly, and in the State Parliaments of South Australia and Tasmania as the House of Assembly. In Queensland the sole legislative chamber is known as the Legislative Assembly. The extent of the legislative powers of the Parliaments is defined by the Commonwealth and State Constitutions. In those States that have a bicameral legislature the Legislative Assembly or House of Assembly is the larger House. The members of the Legislative Assembly or House of Assembly, as the case may be, of each State are elected by the people, the franchise extending to adult British subjects with certain residential qualifications, except in Western Australia, where from December 1970, the Electoral Act was amended to allow persons 18 years of age, in lieu of 21 years of age as previously, to elect members of both the Legislative Assembly and the Legislative Council. With the exception of the New South Wales Legislative Council, the members of State Legislative Councils are, in common with members of the Lower Houses, elected by the people of the respective States. In New South Wales a quarter of the members of the Legislative Council retire each three years, and the continuing members of the Council and the members of the Legislative Assembly, voting as an electoral body, elect members to fill the vacant positions. In Victoria, and Tasmania members of the Legislative Council are elected by adult suffrage, while the franchise is limited in South Australia to the holders of certain property or service qualifications and their spouses. In the Commonwealth Parliament the qualifications for the franchise are identical for both Houses, extending to adult British subjects who have lived in Australia for six months continuously.

#### The Sovereign

On 7 February 1952 the Governor-General and members of the Federal Executive Council proclaimed Princess Elizabeth Queen Elizabeth the Second, Queen of this Realm and of all Her other Realms and Territories, Head of the Commonwealth, Defender of the Faith, Supreme Liege Lady in and over the Commonwealth of Australia. The coronation of Her Majesty in Westminster Abbey took place on 2 June 1953.

#### The Governor-General

*Powers and functions.* As the Queen's representative in Australia, the Governor-General exercises certain prerogative powers and functions assigned to him by the Queen. Other powers and functions are conferred on him by the Constitution. Powers which have been so assigned or conferred include, among others, the power to grant pardons and to remit fines for offences against the laws of the Commonwealth; to appoint certain officers in the Diplomatic or Consular Service of the Commonwealth; to appoint times for holding the sessions of the Parliament, prorogue Parliament, and dissolve the House of Representatives; to cause writs to be issued for general elections of members of the House of Representatives; to assent in the Queen's name to a proposed law passed by both Houses of the Parliament or withhold assent, or to reserve the law for the Queen's pleasure, or to return the proposed law to the House in which it originated and transmit therewith any amendments which he



may recommend; to exercise the executive power of the Commonwealth; to choose and summon Executive Councillors, who hold office during his pleasure; and to appoint Ministers of State for the Commonwealth. In addition, the command-in-chief of the defence forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

Many Acts of the Commonwealth Parliament provide that the Governor-General may make regulations to give effect to the Act. The Governor-General may also be authorised by statute to issue proclamations—for example, to declare an Act in force or a state of things to exist, e.g. the calling out of the Citizen Military Forces in time of war or defence emergency. He has been given power by statute to legislate for certain Territories of the Commonwealth. Under the conventions of responsible government obtaining in British Commonwealth countries, the Governor-General's functions are exercised generally on the advice of Ministers of State.

*Holders of office.* The following list shows the names of the Governors-General since the inception of the Commonwealth.

#### GOVERNORS-GENERAL

Rt Hon. JOHN ADRIAN LOUIS, EARL OF HOPETOUN (afterwards MARQUIS OF LINLITHGOW), P.C., K.T., G.C.M.G., G.C.V.O. From 1 January 1901 to 9 January 1903.

Rt Hon. HALLAM, BARON TENNYSON, P.C., G.C.M.G. From 17 July 1902 to 9 January 1903 (Acting).

Rt Hon. HALLAM, BARON TENNYSON, P.C., G.C.M.G. From 9 January 1903 to 21 January 1904.

Rt Hon. HENRY STAFFORD, BARON NORTHCOTE, P.C., G.C.M.G., G.C.I.E., C.B. From 21 January 1904 to 9 September 1908.

Rt Hon. WILLIAM HUMBLE, EARL OF DUDLEY, P.C., G.C.B., G.C.M.G., G.C.V.O. From 9 September 1908 to 31 July 1911.

Rt Hon. THOMAS, BARON DENMAN, P.C., G.C.M.G., K.C.V.O. From 31 July 1911 to 18 May 1914.

Rt Hon. SIR RONALD CRAUFURD MUNRO-FERGUSON (afterwards VISCOUNT NOVAR OF RAITH), G.C.M.G. From 18 May 1914 to 6 October 1920.

Rt Hon. HENRY WILLIAM, BARON FORSTER OF LEPE, P.C., G.C.M.G. From 6 October 1920 to 8 October 1925.

Rt Hon. JOHN LAWRENCE, BARON STONEHAVEN (afterwards 1ST VISCOUNT STONEHAVEN), P.C., G.C.M.G., D.S.O. From 8 October 1925 to 22 January 1931.

Rt Hon. SIR ISAAC ALFRED ISAACS, G.C.B., G.C.M.G., K.C. From 22 January 1931 to 23 January 1936.

Brigadier-General the Rt Hon. ALEXANDER GORE ARKWRIGHT, BARON GOWRIE (afterwards 1ST EARL OF GOWRIE), V.C., P.C., G.C.M.G., C.B., D.S.O., K.G.St.J. From 23 January 1936 to 30 January 1945.

His Royal Highness PRINCE HENRY WILLIAM FREDERICK ALBERT, DUKE OF GLOUCESTER, EARL OF ULSTER AND BARON CULLODEN, K.G., P.C., K.T., K.P., G.C.B., G.C.M.G., G.C.V.O., General in the Army, Air Chief Marshal in the Royal Air Force, One of His Majesty's Personal Aides-de-Camp. From 30 January 1945 to 11 March 1947.

Rt Hon. SIR WILLIAM JOHN MCKELL, G.C.M.G., Q.C. From 11 March 1947 to 8 May 1953.

Field Marshal SIR WILLIAM JOSEPH SLIM (afterwards VISCOUNT SLIM OF YARRALUMLA), K.G., G.C.B., G.C.M.G., G.C.V.O., G.B.E., D.S.O., M.C., K.St.J. From 8 May 1953 to 2 February 1960.

Rt Hon. WILLIAM SHEPHERD, VISCOUNT DUNROSSIL, P.C., G.C.M.G., M.C., K.St.J., Q.C. From 2 February 1960 to 3 February 1961.

Rt Hon. WILLIAM PHILIP, VISCOUNT DE LISLE, V.C., P.C., G.C.M.G., G.C.V.O., K.St.J. From 3 August 1961 to 22 September 1965.

Rt Hon. RICHARD GARDINER, BARON CASEY, K.G., P.C., G.C.M.G., C.H., D.S.O., M.C., K.St.J. From 22 September 1965 to 30 April 1969.

Rt Hon. Sir PAUL HASLUCK, G.C.M.G., G.C.V.O., K.St.J. From 30 April 1969.

*Administrators.* In addition to the holders of the office of Governor-General listed above, certain persons have, from time to time, been appointed as Administrator of the Government of the Commonwealth. Administrators are appointed in the event of the death, illness, or absence from Australia of the Governor-General, or for the period between the departure of a Governor-General and the arrival of his successor. The following is a list of such appointments.

### ADMINISTRATORS

Rt Hon. FREDERIC JOHN NAPIER, BARON CHELMSFORD (afterwards 1ST VISCOUNT CHELMSFORD), K.C.M.G. From 21 December 1909 to 27 January 1910.

Lieut.-Colonel the Rt Hon. ARTHUR HERBERT TENNYSON, BARON SOMERS, K.C.M.G., D.S.O., M.C. From 3 October 1930 to 22 January 1931.

Captain the Rt Hon. WILLIAM CHARLES ARCEDECKNE, BARON HUNTINGFIELD, K.C.M.G., K.St.J. From 29 March 1938 to 24 September 1938.

Major-General SIR WINSTON JOSEPH DUGAN (afterwards 1ST BARON DUGAN OF VICTORIA), G.C.M.G., C.B., D.S.O. From 5 September 1944 to 30 January 1945; 19 January 1947 to 11 March 1947.

General\* SIR JOHN NORTHCOTT, K.C.M.G., K.C.V.O., C.B., From 19 July 1951 to 14 December 1951; 30 July 1956 to 22 October 1956.

General SIR REGINALD ALEXANDER DALLAS BROOKS, K.C.B., K.C.M.G.†, K.C.V.O., D.S.O., K.St.J. From 8 January 1959 to 16 January 1959; 4 February 1961 to 3 August 1961; 5 June 1962 to 3 October 1962; 21 November 1962 to 18 December 1962.

General SIR ERIC WINSLOW WOODWARD, K.C.M.G., K.C.V.O., C.B., C.B.E., D.S.O., K.St.J. From 16 June 1964 to 30 August 1964.

Colonel SIR HENRY ABEL SMITH, K.C.M.G., K.C.V.O., D.S.O., K.St.J. From 7 May 1965 to 22 September 1965.

Lieut.-General SIR EDRIC MONTAGUE BASTYAN, K.C.M.G., K.C.V.O., K.B.E., C.B. From 24 April 1967 to 1 June 1967.

### Governors of the States

*Powers and functions.* The Queen is represented in each of the States by a Governor, the office having been constituted by Letters Patent under the Great Seal of the United Kingdom of various dates. The Governors of the States exercise prerogative powers conferred on them by these Letters Patent, their Commissions of appointment, and the Governor's Instructions given them under the Royal Sign Manual and Signet or other instrument as specified in the Letters Patent. In addition, they have been invested with various statutory functions by State Constitutions and other Imperial Acts and by Acts of the Parliaments of the States.

A Governor of a State assents in the Queen's name to Bills passed by the Parliament of the State, except those reserved for the Royal assent. The latter include certain classes of Bills which are regulated by the Constitution Acts and by the Governor's Instructions. He administers the prerogative of mercy by the reprieve or pardon of criminal offenders within his jurisdiction, and may remit fines and penalties due to the Crown. In the performance of his functions generally, particularly those conferred by Statute, the Governor of a State acts on the advice of Ministers of State for the State.

*Holders of office.* The names of the present (January 1971) State Governors are as follows:

### STATE GOVERNORS, JANUARY 1971

*New South Wales*—SIR ARTHUR RODEN CUTLER, V.C., K.C.M.G., K.C.V.O., C.B.E., K.St.J.

*Victoria*—MAJOR-GENERAL SIR ROHAN DELACOMBE, K.C.M.G., K.C.V.O., K.B.E., C.B., D.S.O., K.St.J.

*Queensland*—SIR ALAN JAMES MANSFIELD, K.C.M.G., K.C.V.O.

*South Australia*—MAJOR-GENERAL SIR JAMES WILLIAM HARRISON, K.C.M.G., C.B., C.B.E.

*Western Australia*—MAJOR-GENERAL SIR DOUGLAS ANTHONY KENDREW, K.C.M.G., C.B., C.B.E., D.S.O.

*Tasmania*—LIEUT.-GENERAL SIR EDRIC MONTAGUE BASTYAN, K.C.M.G., K.C.V.O., K.B.E., C.B.

### The Cabinet and executive government

Both in the Commonwealth and in the States, executive government is based on the system which was evolved in Britain in the 18th Century, and which is generally known as 'Cabinet' or 'responsible' government. Its essence is that the head of the State (Her Majesty the Queen, and her representative, the Governor-General or Governor) should perform governmental acts on the advice of her Ministers; that she should choose her principal Ministers of State from members of Parliament belonging to the party, or coalition of parties, commanding a majority in the lower House; that the Ministry so chosen should be collectively responsible to that House for the government of the country; and that the Ministry should resign if it ceases to command a majority there.

\* Lieutenant-General Sir John Northcott was granted honorary rank of General while administering the Government of the Commonwealth. † G.C.M.G., 1963.

The Cabinet system operates chiefly by means of constitutional conventions, customs, or understandings, and through institutions that do not form part of the legal structure of the government at all. The Constitutions of the Commonwealth and the States make fuller legal provision for the Cabinet system than the British Constitution does—for example, by requiring that Ministers shall either be, or within a prescribed period become, members of the Legislature. In general, however, the legal structure of the executive government remains the same as it was before the establishment of the Cabinet system.

The executive power of the Commonwealth is exercisable by the Governor-General, and that of the States by the Governor. In each case he is advised by an Executive Council, which, however, meets only for certain formal purposes, as explained below. The whole policy of a Ministry is, in practice, determined by some or all of the Ministers of State, meeting without the Governor-General or Governor under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

*The Cabinet.* This body does not form part of the legal mechanism of government. Its meetings are private and deliberative. The actual Ministers of the day alone are present, no records of the meetings are made public, and the decisions taken have, in themselves, no legal effect. In Australia until January 1956 all Ministers were members of the Cabinet. Since then, however, although in the States all Ministers are members of the Cabinet, the Commonwealth ministry is made up of thirteen senior Ministers, who constitute the Cabinet, and other Ministers\* of non-Cabinet rank who attend meetings of the Cabinet only when required, as, for example, when the business of the Cabinet concerns their departments. As Ministers are the leaders of the party or parties commanding a majority in the lower House, the Cabinet substantially controls, in ordinary circumstances, not only the general legislative programme of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the country. Even in summoning, proroguing, or dissolving Parliament, the Governor-General or Governor is usually guided by the advice tendered him by the Cabinet, through the Prime Minister or Premier, though legally the discretion is vested in the Governor-General or Governor himself.

*The Executive Council.* This body is usually presided over by the Governor-General or Governor, the members thereof holding office during his pleasure. All Ministers of State must be members of the Executive Council. In the Commonwealth, and also in the States of Victoria and Tasmania, Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings, for it is an essential feature of the Cabinet system that attendance should be limited to the Ministers of the day. The Meetings of the Executive Council are formal and official in character, and a record of proceedings is kept by the Secretary or Clerk. At Executive Council meetings the decisions of the Cabinet are, where necessary, given legal form, appointments made, resignations accepted, proclamations issued, and regulations and the like approved.

*The appointment of Ministers.* Legally, Ministers hold office during the pleasure of the Governor-General or Governor. In practice, however, the discretion of the Queen's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. When a Ministry resigns, the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command, a majority in the Lower House, and to commission him, as Prime Minister or Premier, to 'form a Ministry'—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

*Ministers in Upper and Lower Houses.* The following table shows the distribution of Ministers in the Houses of each Parliament in January 1971.

AUSTRALIAN PARLIAMENTS: MINISTERS IN UPPER OR LOWER HOUSES  
JANUARY 1971

Ministers with seats in—	Cwlth	N.S.W.	Vic.	Qld	S.A.(a)	W.A.	Tas.	Total
The Upper House	5	2	4	(b)	3	3	..	17
The Lower House	21	16	11	14	7	9	9	87
<b>Total</b>	<b>26</b>	<b>18</b>	<b>15</b>	<b>14</b>	<b>10</b>	<b>12</b>	<b>9</b>	<b>104</b>

(a) By the Constitution Act, the number of Ministers was increased to ten in 1970. (b) Abolished in 1922.

\* Thirteen from 12 November 1969.



**Commonwealth Ministries**

*Names and tenure of office, 1901 to 1971.* The following list shows the name of each Commonwealth Ministry to hold office since 1 January 1901, and the limits of its term of office.

**COMMONWEALTH MINISTRIES, 1901 TO MARCH 1971**

- (i) BARTON MINISTRY, 1 January 1901 to 24 September 1903.
- (ii) DEAKIN MINISTRY, 24 September 1903 to 27 April 1904.
- (iii) WATSON MINISTRY, 27 April 1904 to 18 August 1904.
- (iv) REID-McLEAN MINISTRY, 18 August 1904 to 5 July 1905.
- (v) DEAKIN MINISTRY, 5 July 1905 to 13 November 1908.
- (vi) FISHER MINISTRY, 13 November 1908 to 2 June 1909
- (vii) DEAKIN MINISTRY, 2 June 1909 to 29 April 1910.
- (viii) FISHER MINISTRY, 29 April 1910 to 24 June 1913.
- (ix) COOK MINISTRY, 24 June 1913 to 17 September 1914.
- (x) FISHER MINISTRY, 17 September 1914 to 27 October 1915.
- (xi) HUGHES MINISTRY, 27 October 1915 to 14 November 1916.
- (xii) HUGHES MINISTRY, 14 November 1916 to 17 February 1917.
- (xiii) HUGHES MINISTRY, 17 February 1917 to 10 January 1918.
- (xiv) HUGHES MINISTRY, 10 January 1918 to 9 February 1923.
- (xv) BRUCE-PAGE MINISTRY, 9 February 1923 to 22 October 1929.
- (xvi) SCULLIN MINISTRY, 22 October 1929 to 6 January 1932.
- (xvii) LYONS MINISTRY, 6 January 1932 to 7 November 1938.
- (xviii) LYONS MINISTRY, 7 November 1938 to 7 April 1939.
- (xix) PAGE MINISTRY, 7 April 1939 to 26 April 1939.
- (xx) MENZIES MINISTRY, 26 April 1939 to 14 March 1940
- (xxi) MENZIES MINISTRY, 14 March 1940 to 28 October 1940.
- (xxii) MENZIES MINISTRY, 28 October 1940 to 29 August 1941.
- (xxiii) FADDEN MINISTRY, 29 August 1941 to 7 October 1941.
- (xxiv) CURTIN MINISTRY, 7 October 1941 to 21 September 1943.
- (xxv) CURTIN MINISTRY, 21 September 1943 to 6 July 1945.
- (xxvi) FORDE MINISTRY, 6 July 1945 to 13 July 1945.
- (xxvii) CHIFLEY MINISTRY, 13 July 1945 to 1 November 1946.
- (xxviii) CHIFLEY MINISTRY, 1 November 1946 to 19 December 1949.
- (xxix) MENZIES MINISTRY, 19 December 1949 to 11 May 1951.
- (xxx) MENZIES MINISTRY, 11 May 1951 to 11 January 1956.
- (xxxi) MENZIES MINISTRY, 11 January 1956 to 10 December 1958.
- (xxxii) MENZIES MINISTRY, 10 December 1958 to 18 December 1963.
- (xxxiii) MENZIES MINISTRY, 18 December 1963 to 26 January 1966.
- (xxxiv) HOLT MINISTRY, 26 January 1966 to 14 December 1966.
- (xxxv) HOLT MINISTRY, 14 December 1966 to 19 December 1967.
- (xxxvi) McEWEN MINISTRY, 19 December 1967 to 10 January 1968.
- (xxxvii) GORTON MINISTRY, 10 January 1968 to 28 February 1968.
- (xxxviii) GORTON MINISTRY, 28 February 1968 to 12 November 1969.
- (xxxix) GORTON MINISTRY, 12 November 1969 to 10 March 1971.
- (xl) McMAHON MINISTRY, 10 March 1971 to 22 March 1971.
- (xli) McMAHON MINISTRY, 22 March 1971.

*Names of members of each Ministry to 22 March 1971.* In Year Book No. 17, 1924, the names are given of each Ministry up to the Bruce-Page Ministry (9 February 1923 to 22 October 1929), together with the names of the successive holders of portfolios therein, and issue No. 39 contains a list, commencing with the Bruce-Page Ministry, which covers the period between the date on which it assumed power, 9 February 1923, and 31 July 1951, showing the names of all persons who held office in each Ministry during that period. The names of members of subsequent Ministries are listed in successive issues of the Year Book after No. 39.

This issue shows only particulars of the second McMahon Ministry.

## McMAHON MINISTRY—FROM 22 MARCH 1971

(The State in which each Minister's electorate is situated and party affiliation are shown in parenthesis. Party affiliation is indicated by the use of the following abbreviations: C.P.—Australian Country Party, Lib.—Liberal Party of Australia.)

*\*Prime Minister—*

THE RT HON. W. McMAHON, M.P. (N.S.W.) (Lib.)

*\*Deputy Prime Minister and Minister for Trade and Industry—*

THE HON. J. D. ANTHONY, M.P. (N.S.W.) (C.P.)

*\*Minister for Defence—*

THE RT HON. J. G. GORTON, M.P. (Vic.) (Lib.)

*\*Minister for Primary Industry—*

THE HON. IAN SINCLAIR, M.P. (N.S.W.) (C.P.)

*\*Minister for Supply and Leader of the Government in the Senate—*

SENATOR THE HON. SIR KENNETH ANDERSON (N.S.W.) (Lib.)

*\*Minister for National Development and Leader of the House—*

THE HON. R. W. C. SWARTZ, M.B.E., E.D., M.P. (Qld) (Lib.)

*\*Treasurer—*

THE HON. B. M. SNEDDEN, Q.C., M.P. (Vic.) (Lib.)

*\*Attorney-General—*

THE HON. N. H. BOWEN, Q.C., M.P. (N.S.W.) (Lib.)

*\*Minister for Education and Science—*

THE HON. D. E. FAIRBAIRN, D.F.C., M.P. (N.S.W.) (Lib.)

*\*Postmaster-General and Vice-President of the Executive Council—*

THE HON. SIR ALAN HULME, K.B.E., M.P. (Qld) (Lib.)

*\*Minister for Foreign Affairs—*

THE HON. L. H. E. BURY, M.P. (N.S.W.) (Lib.)

*\*Minister for Shipping and Transport—*

THE HON. P. J. NIXON, M.P. (Vic.) (C.P.)

*\*Minister for Labour and National Service—*

THE HON. P. R. LYNCH, M.P. (Vic.) (Lib.)

*Minister for External Territories—*

THE HON. C. E. BARNES, M.P. (Qld) (C.P.)

*Minister for Immigration—*

THE HON. A. J. FORBES, M.C., M.P. (S.A.) (Lib.)

*Minister for Social Services and under the Prime Minister, Minister in Charge of Aboriginal Affairs—*

THE HON. W. C. WENTWORTH, M.P. (N.S.W.) (Lib.)

*Minister for Works and under the Minister for Trade and Industry, Minister in Charge of Tourist Activities—*

SENATOR THE HON. R. C. WRIGHT, (Tas.) (Lib.)

*Minister for Civil Aviation—*

SENATOR THE HON. R. C. COTTON, (N.S.W.) (Lib.)

*Minister for Customs and Excise—*

THE HON. D. L. CHIPP, M.P. (Vic.) (Lib.)

*Minister for Air—*

SENATOR THE HON. T. C. DRAKE-BROCKMAN, D.F.C., (W.A.) (C.P.)

*Minister for the Army and Minister Assisting the Prime Minister—*

THE HON. A. S. PEACOCK, M.P. (Vic.) (Lib.)

*Minister for Repatriation—*

THE HON. R. MCN. HOLTEN, M.P. (Vic.) (C.P.)

*Minister for Health—*

SENATOR THE HON. I. J. GREENWOOD (Vic.) (Lib.)

*Minister for the Navy—*

THE HON. M. G. MACKAY, M.P. (N.S.W.) (Lib.)

*Minister for the Interior—*

THE HON. R. J. D. HUNT, M.P. (N.S.W.) (C.P.)

*Minister for Housing—*

THE HON. K. M. K. CAIRNS, M.P. (Qld) (Lib.)

\* Minister in Cabinet.

*Names of Ministers of State.* Year Book No. 38 contains a statement listing the Commonwealth Departments in existence during the period 1 April 1925 to 31 December 1949 and the names of the Ministers of State who had administered them (pages 74-9). This is in continuation of a similar statement covering the period from the inauguration of the Commonwealth Government to 1925 which appears in Year Book No. 18.

#### State Premiers, March, 1971

The names of the Premiers of each State in March 1971 are shown below.

#### STATE PREMIERS, MARCH 1971

*New South Wales*—The Hon. R. W. Askin, M.L.A. (Lib.)  
*Victoria*—The Hon. Sir Henry Bolte, K.C.M.G., M.P. (Lib.)  
*Queensland*—The Hon. J. Bjelke-Petersen, M.L.A. (C.P.)  
*South Australia*—The Hon. D. A. Dunstan, Q.C., M.P. (A.L.P.)  
*Western Australia*—The Hon. J. T. Tonkin, M.L.A. (A.L.P.)  
*Tasmania*—The Hon. W. A. Bethune, M.H.A. (Lib.)

#### Leaders of the Opposition, Commonwealth and State Parliaments, March 1971

The Leader of the Opposition plays an important part in the Party system of government which operates in the Australian Parliaments. The following list gives the names of the holders of this position in each of the Parliaments in March 1971.

#### LEADERS OF THE OPPOSITION, MARCH 1971

*Commonwealth*—E. G. Whitlam, Q.C., M.P. (A.L.P.)  
*New South Wales*—P. D. Hills, M.L.A. (A.L.P.)  
*Victoria*—A. C. Holding, M.P. (A.L.P.)  
*Queensland*—J. W. Houston, M.L.A. (A.L.P.)  
*South Australia*—R. S. Hall, M.P. (L.C.L.)  
*Western Australia*—The Hon. Sir David Brand, K.C.M.G., M.L.A. (Lib.)  
*Tasmania*—The Hon. E. E. Reece, M.H.A. (A.L.P.)

#### Numbers and salaries of Commonwealth Ministers

Under sections 65 and 66, respectively, of the Constitution of the Commonwealth the number of Ministers of State was not to exceed seven, and the annual sum payable for their salaries was not to exceed £12,000 (\$24,000), each provision to operate, however, 'until the Parliament otherwise provides'.

Subsequently the number and salaries have been increased from time to time, and from December 1968 the annual sum payable for salaries has been fixed at \$245,500 and the number of Ministers at twenty-six. An additional ministerial allowance of \$10,300 a year has been payable to the Prime Minister since December 1968, and an additional ministerial allowance of \$4,600 a year for senior Ministers and \$4,000 a year for other Ministers.

All amounts payable in the foregoing paragraphs are in addition to amounts payable as Parliamentary allowances (see page 75).

### Parliaments and elections

#### The Commonwealth Parliaments

The first Parliament of the Commonwealth was convened by proclamation dated 29 April 1901 by His Excellency the Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on 9 May 1901 by H.R.H. the Duke of Cornwall and York. The Rt Hon. Sir Edmund Barton, G.C.M.G., K.C., was Prime Minister.

The following table shows the number and duration of Parliaments since federation.



## COMMONWEALTH PARLIAMENTS

<i>Number of Parliament</i>	<i>Date of opening</i>	<i>Date of dissolution</i>
First . . . . .	9 May 1901 . . . . .	23 November 1903
Second . . . . .	2 March 1904 . . . . .	5 November 1906
Third . . . . .	20 February 1907 . . . . .	19 February 1910
Fourth . . . . .	1 July 1910 . . . . .	23 April 1913
Fifth . . . . .	9 July 1913 . . . . .	30 July 1914(a)
Sixth . . . . .	8 October 1914 . . . . .	26 March 1917
Seventh . . . . .	14 June 1917 . . . . .	3 November 1919
Eighth . . . . .	26 February 1920 . . . . .	6 November 1922
Ninth . . . . .	28 February 1923 . . . . .	3 October 1925
Tenth . . . . .	13 January 1926 . . . . .	9 October 1928
Eleventh . . . . .	6 February 1929 . . . . .	16 September 1929
Twelfth . . . . .	20 November 1929 . . . . .	27 November 1931
Thirteenth . . . . .	17 February 1932 . . . . .	7 August 1934
Fourteenth . . . . .	23 October 1934 . . . . .	21 September 1937
Fifteenth . . . . .	30 November 1937 . . . . .	27 August 1940
Sixteenth . . . . .	20 November 1940 . . . . .	7 July 1943
Seventeenth . . . . .	23 September 1943 . . . . .	16 August 1946
Eighteenth . . . . .	6 November 1946 . . . . .	31 October 1949
Nineteenth . . . . .	22 February 1950 . . . . .	19 March 1951(a)
Twentieth . . . . .	12 June 1951 . . . . .	21 April 1954
Twenty-first . . . . .	4 August 1954 . . . . .	4 November 1955
Twenty-second . . . . .	15 February 1956 . . . . .	14 October 1958
Twenty-third . . . . .	17 February 1959 . . . . .	2 November 1961
Twenty-fourth . . . . .	20 February 1962 . . . . .	1 November 1963
Twenty-fifth . . . . .	25 February 1964 . . . . .	31 October 1966
Twenty-sixth . . . . .	21 February 1967 . . . . .	29 September 1969
Twenty-seventh . . . . .	25 November 1969 . . . . .	

(a) A dissolution of both the Senate and the House of Representatives was granted by the Governor-General, acting on the advice of the Cabinet and under section 57 of the Constitution.

There have been twenty-six complete Parliaments since Federation. Until 1927 the Parliament met in Melbourne; it now meets in Canberra, the first meeting at Parliament House, Canberra, being opened by the Duke of York on 9 May 1927.

The twenty-sixth Parliament opened on 21 February 1967 and ended on 29 September 1969 when the House of Representatives was dissolved. Elections for the House of Representatives were held on 25 October 1969. Elections were also held on the same date to fill casual vacancies in the Senate for each of the States of Victoria, and South Australia. Particulars of electors and voting are given on page 70. For particulars of electors enrolled and of electors who voted in the several States and Territories at previous Commonwealth elections, see Year Book No. 56 and earlier issues.

A special article describing the Commonwealth Parliament, its functions and procedure, prepared by the Clerk of the Senate and the Clerk of the House of Representatives, appears in Year Book No. 49, pages 65-71.

#### Qualifications for membership and for franchise—Commonwealth Parliament

Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any British subject, twenty-one years of age or over and not disentitled on other grounds, who has resided in the Commonwealth for at least three years and who is, or is qualified to become, an elector of the Commonwealth. Qualifications for Commonwealth franchise are possessed by any British subject, not under twenty-one years of age and not disentitled on other grounds, who has lived in Australia for six months continuously. Residence in a Subdivision for a period of one month prior to enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory except that the compulsory enrolment provisions do not relate to an Aboriginal native of Australia. A member of the Defence Force on service outside Australia who is a British subject not less than 21 years of age and has lived in Australia for six months continuously is entitled to vote at Commonwealth elections, whether enrolled or not. In 1966 the franchise was extended to entitle a British subject who is less than twenty-one years of age, who has lived in Australia for six months continuously and who is, or has been, on 'special service' outside Australia as a member of the Defence Force, to vote at elections as if his name appeared on the roll. 'Special service' takes the same meaning as that term in the Repatriation (Special Overseas Service) Act and means, in relation to a person, service during a period when he is outside Australia and he or his unit is allotted for special duty in a special area.

The principal reasons for disqualification of persons otherwise eligible for election as members of either Commonwealth House are: membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding an office of profit under the Crown (with certain exceptions), or having pecuniary interest in any agreement with the public service of the Commonwealth except as a member of an incorporated company of more than twenty-five persons. Persons of unsound mind, attainted of treason, convicted and under sentence for any offence punishable by imprisonment for one year or longer, or persons who are holders of temporary entry permits under the *Migration Act* 1958–1966 or are prohibited immigrants under that Act are excluded from the franchise. In the main, these or similar grounds for disqualification apply also to State Parliament membership and franchise. Aborigines are entitled to enrol and to vote at both Commonwealth and State elections in all States.

### Commonwealth Parliaments and elections

From the establishment of the Commonwealth until 1949 the Senate consisted of thirty-six members, six being returned by each of the original federating States. The Constitution empowers Parliament to increase or decrease the size of the Parliament, and, as the population of the Commonwealth had more than doubled since its inception, the Parliament passed the *Representation Act* 1948 which provided that there should be ten Senators from each State instead of six, increasing the total to sixty Senators, thus enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation.

In accordance with the Constitution the total number of members of the House of Representatives must be as nearly as practicable double that of the Senate.\* Consequently, in terms of the Constitution and the Representation Act, from the date of the 1949 elections the number of members in the House of Representatives was increased from 74 to 121 (excluding the members for the internal Territories). As the States are represented in the House of Representatives on a population basis, the numbers were increased as follows: New South Wales—from 28 to 47; Victoria—from 20 to 33; Queensland—from 10 to 18; South Australia—from 6 to 10; and Western Australia—from 5 to 8. Tasmania's representation remained at 5 and the total was increased from 74 to 121. The increase in the number of members of Parliament necessitated a redistribution of seats and a redetermination of electoral boundaries. Redistributions are carried out by distribution commissioners appointed for each State. The redistributions are effected on a quota basis, but taking into account community interests, means of communication, physical features, existing boundaries, and other factors.

The population as disclosed by the Census taken on 30 June 1954 necessitated a further alteration in representation in the House of Representatives in respect of New South Wales, South Australia, and Western Australia. Representation as from the general election for the House of Representatives on 10 December 1955 had been: New South Wales 46, Victoria 33, Queensland 18, South Australia 11, Western Australia 9, Tasmania 5, the total number of members (excluding the members for the internal Territories) being increased from 121 to 122.

The population as disclosed by the Census taken on 30 June 1961 revealed that, under the provisions of the Representation Act, New South Wales, Queensland, and Western Australia would each lose one member in the House of Representatives, while Victoria would gain a member. The distribution commissioners' reports were duly laid before both Houses of Parliament, but the Government decided not to proceed with the proposals and announced that it would amend the Representation Act. In November 1964 the formula provided by Section 10 of the Representation Act for determining the number of members of the House of Representatives was amended so as to give a State an additional member for 'any portion of a quota'. The effect of that amendment would have been that at the next redistribution Victoria and South Australia would each gain one member while all other States would retain their existing representation. However, no fresh redistribution was effected prior to the 1966 Census. Resulting from the population disclosed by the 1966 Census the Chief Electoral Officer determined that the number of members of the House of Representatives to be chosen in the several States shall be: New South Wales 45, Victoria 34, Queensland 18, South Australia 12, Western Australia 9, and Tasmania 5. A redistribution of the States into electoral divisions was effected in 1968 by distribution commissioners appointed in each State, and the reports submitted by the distribution commissioners were approved by both Houses of Parliament in respect of all States in October–November 1968. Consequently this new representation became effective at the general election of members of the House of Representatives held on 25 October 1969.

Since the general election of 1922 the Northern Territory has been represented by one member in the House of Representatives, and the Australian Capital Territory has had similar representation since the elections of 1949. The member for the the Australian Capital Territory has had full voting

\* A proposal to alter the Constitution so that numbers of members of the House of Representatives might be increased without necessarily increasing the number of Senators was the subject of a referendum in March 1967, but was rejected. See Year Book No. 54, page 66, for results of the Referendum.

rights since the first sitting of the twenty-sixth Parliament. In May 1968 the Northern Territory Representation Act was amended to give full voting rights to the Member for the Northern Territory effective from 15 May 1968, the day on which the Act received Royal Assent.

The Constitution provides for a minimum of five members for each original State. Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. At elections for Senators the whole State constitutes the electorate. For the purpose of elections for the House of Representatives the State is divided into single electorates corresponding in number to the number of members to which the State is entitled. Further information regarding the Senate and the House of Representatives is given in earlier issues of the Year Book.

The *Commonwealth Electoral Act* 1948, introduced with the *Representation Act* 1948 to enlarge the Commonwealth Parliament (see page 69), changed the system of scrutiny and counting of votes in Senate elections from the alternative vote to that of proportional representation. For a description of the system, see Year Book No. 38, pages 82-3. The system of voting for both the Senate and the House of Representatives is preferential.

Particulars of voting at Senate elections and elections for the House of Representatives up to 1967 appear in earlier issues of the Year Book, and additional information is available in the *Statistical Returns* issued by the Chief Electoral Officer following each election and printed as Parliamentary Papers.

The numbers of electors and of primary votes cast for the major political parties in each State and Territory at the latest election for each House were as follows.

#### COMMONWEALTH ELECTIONS, 1969 AND 1970

State or Territory	Electors enrolled	Votes recorded			Australian Democratic Labor Party	Others	Informal	Total
		Liberal Party of Australia	Aus- tralian Country Party	Aus- tralian Labor Party				
HOUSE OF REPRESENTATIVES ELECTION, 25 OCTOBER 1969								
New South Wales	2,438,667	760,612	220,539	1,074,916	75,905	122,216	53,811	2,307,999
Victoria	1,809,549	626,474	113,958	689,515	180,205	57,722	56,724	1,724,598
Queensland	953,564	245,159	152,041	430,403	60,841	4,142	11,463	904,049
South Australia	624,626	245,287	..	303,419	17,930	12,521	20,562	599,719
Western Australia	484,128	160,473	28,413	222,709	24,461	9,031	11,699	456,786
Tasmania	211,220	72,490	..	105,556	8,635	13,741	3,538	203,960
Northern Territory	21,186	..	8,281	5,204	..	3,629	613	17,727
Australian Capital Territory	63,293	15,492	..	39,070	..	3,128	1,083	58,773
Australia	6,606,233	2,125,987	523,232	2,870,792	367,977	226,130	159,493	6,273,611

#### SENATE ELECTION, 21 NOVEMBER 1970

New South Wales	2,455,958	786,229	939,721	144,544	193,972	231,345	2,295,811
Victoria	1,848,117	588,817	565,098	294,413	95,782	198,865	1,742,975
Queensland	958,449	311,905	350,034	136,850	36,039	64,652	899,480
South Australia	639,807	233,054	251,117	17,902	64,889	42,306	609,268
Western Australia	497,066	109,890	59,416	184,648	23,938	49,944	462,998
Tasmania	212,345	59,712	85,597	7,495	37,827	12,600	203,231
Australia	6,611,742	2,149,023	2,376,215	625,142	478,453	584,930	6,213,763

Membership at the beginning of 1971 was: *Senate*—Liberal Party of Australia, 21; Australian Country Party, 6; Australian Labor Party, 26; Australian Democratic Labor Party, 5; Independent, 1; Vacant, 1; *House of Representatives*—Liberal Party of Australia, 46; Australian Country Party, 20; Australian Labor Party, 59.



**Members of the Commonwealth Parliament**

The following is a list of Senators and Members of the House of Representatives of the Commonwealth Parliament as at 1 January 1971. Changes since that date are set out in the Appendix to this volume. Party affiliation is indicated by the use of the following abbreviations:

- A.D.L.P.—Australian Democratic Labor Party  
 A.L.P.—Australian Labor Party  
 C.P.—Australian Country Party  
 Ind.—Independent  
 Lib.—Liberal Party of Australia

**MEMBERS OF THE COMMONWEALTH PARLIAMENT, 1 JANUARY 1971(a)**

**THE SENATE**

*President:*

SENATOR THE HON. SIR ALISTER MAXWELL McMULLIN, K.C.M.G.

*Chairman of Committees:*

SENATOR T. L. BULL, O.B.E.

*Leader of the Government in the Senate:*

SENATOR THE HON. SIR KENNETH ANDERSON

*Leader of the Opposition in the Senate:*

SENATOR L. K. MURPHY, Q.C.

<i>Senator</i>	<i>State</i>	<i>Term(b) expires 30 June</i>	<i>Senator</i>	<i>State</i>	<i>Term(b) expires 30 June</i>
Anderson, Hon. Sir Kenneth (Lib.)	N.S.W.	1971	McClelland, D. (A.L.P.)	N.S.W.	1974
Bishop, R. (A.L.P.)	S.A.	1974	McManus, F. P. (A.D.L.P.)	Vic.	1971
Branson, G. H. (Lib.)	W.A.	1971	McMullin, Hon. Sir Alister, K.C.M.G. (Lib.)	N.S.W.	1971
Bull, T. L., O.B.E. (C.P.)	N.S.W.	1971	Marriott, J. E. (Lib.)	Tas.	1971
Buttfield, Nancy E. (Lib.)	S.A.	1974	Maunsell, C. R. (C.P.)	Qld	1974
Byrne, C. B. (A.D.L.P.)	Qld	1974	Milliner, B. R. (A.L.P.)	Qld	1974
Cameron, D. N. (A.L.P.)	S.A.	1971	Mulvihill, J. A. (A.L.P.)	N.S.W.	1971
Cant, H. G. J. (A.L.P.)	W.A.	1971	Murphy, L. K., Q.C. (A.L.P.)	N.S.W.	1974
Cavanagh, J. L. (A.L.P.)	S.A.	1974	O'Byrne, J. (A.L.P.)	Tas.	1971
Cormack, Sir Magnus, K.B.E. (Lib.)	Vic.	1974	Poke, A. G. (A.L.P.)	Tas.	1974
Cotton, Hon. R. C. (Lib.)	N.S.W.	1974	Poyser, A. G. (A.L.P.)	Vic.	1974
Davidson, G. S. (Lib.)	S.A.	1971	Prowse, E. W. (C.P.)	W.A.	1974
Devitt, D. M. (A.L.P.)	Tas.	1971	Rae, P. E. (Lib.)	Tas.	1974
Dittmer, F. (A.L.P.)	Qld	1971	Rankin, Hon. Dame Anna-belle, D.B.E. (Lib.)	Qld	1974
Drake-Brockman, Hon. T. C., D.F.C. (C.P.)	W.A.	1971	Ridley, C. F. (A.L.P.)	S.A.	1971
Drury, A. J. (A.L.P.)	S.A.	1971	Scott, Hon. M. F. (Lib.)	W.A.	1971
Fitzgerald, J. F. (A.L.P.)	N.S.W.	1974	Sim, J. P. (Lib.)	W.A.	1974
Gair, Hon. V. C. (A.D.L.P.)	Qld	1971	Toohey, J. P. (A.L.P.)	S.A.	1971
Georges, G. (A.L.P.)	Qld	1974	Turnbull, R. J. D. (Ind.)	Tas.	1974
Greenwood, I. J., Q.C. (Lib.)	Vic.	1971	Webster, J. J. (C.P.)	Vic.	1974
Hannan, G. C. (Lib.)	Vic.	1974	Wedgwood, Dame Ivy E. D.B.E. (Lib.)	Vic.	1971
Hendrickson, A. (A.L.P.)	Vic.	1971	Wheeldon, J. M. (A.L.P.)	W.A.	1971
Kane, J. T. (A.D.L.P.)	N.S.W.	1974	Wilkinson, L. D. (A.L.P.)	W.A.	1974
Keeffe, J. B. (A.L.P.)	Qld	1971	Willesee, D. R. (A.L.P.)	W.A.	1974
Kennelly, Hon. P. J. (A.L.P.)	Vic.	1971	Withers, R. G. (Lib.)	W.A.	1974
Lacey, R. H. (A.L.P.)	Tas.	1971	Wood, I. A. C. (Lib.)	Qld	1971
Laucke, C. L. (Lib.)	S.A.	1974	Wriedt, K. S. (A.L.P.)	Tas.	1974
Lawrie, A. G. E. (C.P.)	Qld	1971	Wright, Hon. R. C. (Lib.)	Tas.	1974
Lillico, A. E. D. (Lib.)	Tas.	1971	Young, H. W. (Lib.)	S.A.	1974
Little, J. A. (A.D.L.P.)	Vic.	1974			

(a) For later changes see Appendix. (b) Senators are elected for a term of six years on a rotational basis; the terms of half the Senators expire every third year.

## MEMBERS OF THE COMMONWEALTH PARLIAMENT

1 JANUARY 1971(a)—continued

THE HOUSE OF REPRESENTATIVES  
(Triennial Parliaments—Last General Election  
25 October 1969)*Speaker:*

THE HON. SIR WILLIAM ASTON, K.C.M.G., M.P.

*Chairman of Committees:*

P. E. LUCOCK, M.P.

*Leader of the House:*

THE HON. B. M. SNEDDEN, Q.C., M.P.

*Leader of the Opposition:*

E. G. WHITLAM, Q.C., M.P.

<i>Member</i>	<i>Division</i>	<i>Member</i>	<i>Division</i>
Adermann, Rt Hon. C. F. (C.P.)	Fisher (Q.)	Cross, M. D. (A.L.P.)	Brisbane (Q.)
Anthony, Hon. J. D. (C.P.)	Richmond (N.S.W.)	Daly, F. M. (A.L.P.)	Grayndler (N.S.W.)
Armitage, J. L. (A.L.P.)	Chifley (N.S.W.)	Davies, R. (A.L.P.)	Braddon (T.)
Aston, Hon. Sir William (Lib.)	Phillip (N.S.W.)	Dobie, J. D. M. (Lib.)	Cook (N.S.W.)
Barnard, L. H. (A.L.P.)	Bass (T.)	Drury, E. N. (Lib.)	Ryan (Q.)
Barnes, Hon. C. E. (C.P.)	McPherson (Q.)	Duthie, G. W. A. (A.L.P.)	Wilmot (T.)
Bate, H. J. (Lib.)	Macarthur (N.S.W.)	Enderby, K. E. (A.L.P.)	Aust. Cap. Terr.
Beazley, K. E. (A.L.P.)	Fremantle (W.A.)	England, J. A., E.D. (C.P.)	Calare (N.S.W.)
Bennett, A. F. (A.L.P.)	Swan (W.A.)	Erwin, Hon. G. D. (Lib.)	Ballaarat (V.)
Berinson, J. M. (A.L.P.)	Perth (W.A.)	Everingham, D. N. (A.L.P.)	Capricornia (Q.)
Birrell, F. R. (A.L.P.)	Port Adelaide (S.A.)	Fairbairn, Hon. D. E., D.F.C. (Lib.)	Farrer (N.S.W.)
Bonnett, R. N. (Lib.)	Herbert (Q.)	FitzPatrick, J. (A.L.P.)	Darling (N.S.W.)
Bowen, L. F. (A.L.P.)	Kingsford-Smith (N.S.W.)	Forbes, Hon. A. J., M.C. (Lib.)	Barker (S.A.)
Bowen Hon. N. H., Q.C. (Lib.)	Parramatta (N.S.W.)	Foster, N. K. (A.L.P.)	Sturt (S.A.)
Brown, N. A. (Lib.)	Diamond Valley (V.)	Fox, E. M. C. (Lib.)	Henty (V.)
Bryant, G. M. (A.L.P.)	Wills (V.)	Fraser, A. D. (A.L.P.)	Eden-Monaro (N.S.W.)
Buchanan, A. A. (Lib.)	McMillan (V.)	Fraser, Hon. J. M. (Lib.)	Wannon (V.)
Bury, Hon. L. H. E. (Lib.)	Wentworth (N.S.W.)	Fulton, W. J. (A.L.P.)	Leichhardt (Q.)
Cairns, J. F. (A.L.P.)	Lalor (V.)	Garland, R. V. (Lib.)	Curtin (W.A.)
Cairns, K. M. K. (Lib.)	Lilley (Q.)	Garrick, H. J. (A.L.P.)	Batman (V.)
Calder, S. E., D.F.C. (C.P.)	Northern Territory	Giles, G. O'H. (Lib.)	Angas (S.A.)
Calwell, Rt Hon. A. A. (A.L.P.)	Melbourne (V.)	Gorton, Rt Hon. J. G. (Lib.)	Higgins (V.)
Cameron, C. R. (A.L.P.)	Hindmarsh (S.A.)	Graham, B. W. (Lib.)	North Sydney (N.S.W.)
Cameron, D. M. (Lib.)	Griffith (Q.)	Grassby, A. J. (A.L.P.)	Riverina (N.S.W.)
Cass, M. H. (A.L.P.)	Maribyrnong (V.)	Griffiths, C. E. (A.L.P.)	Shortland (N.S.W.)
Chipp, Hon. D. L. (Lib.)	Hotham (V.)	Gun, R. T. (A.L.P.)	Kingston (S.A.)
Cohen, B. (A.L.P.)	Robertson (N.S.W.)	Hallett, J. M. (C.P.)	Canning (W.A.)
Collard, F. W. (A.L.P.)	Kalgoorlie (W.A.)	Hamer, D. J., D.S.C. (Lib.)	Isaacs (V.)
Connor, R. F. X. (A.L.P.)	Cunningham (N.S.W.)	Hansen, B. P. (A.L.P.)	Wide Bay (Q.)
Cope, J. F. (A.L.P.)	Sydney (N.S.W.)	Hayden, W. G. (A.L.P.)	Oxley (Q.)
Corbett, J. (C.P.)	Maranoa (Q.)	Holten, Hon. R. McN. (C.P.)	Indi (V.)
Cramer, Hon. Sir John (Lib.)	Bennelong (N.S.W.)	Howson, Hon. P. (Lib.)	Casey (V.)
Crean, F. (A.L.P.)	Melbourne Ports (V.)	Hughes, Hon., T. E. F., Q.C. (Lib.)	Berowra (N.S.W.)

(a) For later changes see Appendix.

MEMBERS OF THE COMMONWEALTH PARLIAMENT  
1 JANUARY 1971(a)—continued

THE HOUSE OF REPRESENTATIVES—continued

<i>Member</i>	<i>Division</i>	<i>Member</i>	<i>Division</i>
Hulme, Hon. Sir Alan, K.B.E. (Lib.)	Petrie (Q.)	McMahon, Rt Hon. W. (Lib.)	Lowe (N.S.W.)
Hunt, R. J. D. (C.P.)	Gwydir (N.S.W.)	Morrison, W. L. (A.L.P.)	St George (N.S.W.)
Hurford, C. J. (A.L.P.)	Adelaide (S.A.)	Nicholls, M. H. (A.L.P.)	Bonython (S.A.)
Irwin, L. H., M.B.E. (Lib.)	Mitchell (N.S.W.)	Nixon, Hon. P. J. (C.P.)	Gippsland (V.)
Jacobi, R. (A.L.P.)	Hawker (S.A.)	O'Keeffe, F. L. (C.P.)	Paterson (N.S.W.)
James, A. W. (A.L.P.)	Hunter (N.S.W.)	Patterson, R. A. (A.L.P.)	Dawson (Q.)
Jarman, A. W. (Lib.)	Deakin (V.)	Peacock, Hon. A. S. (Lib.)	Kooyong (V.)
Jenkins, H. A. (A.L.P.)	Scullin (V.)	Pettitt, J. A. (C.P.)	Hume (N.S.W.)
Jess, J. D. (Lib.)	La Trobe (V.)	Reid, L. S., D.F.C. (Lib.)	Holt (V.)
Johnson, L. K. (A.L.P.)	Burke (V.)	Reynolds, L. J. (A.L.P.)	Barton (N.S.W.)
Johnson, L. R. (A.L.P.)	Hughes (N.S.W.)	Robinson, I. L. (C.P.)	Cowper (N.S.W.)
Jones, C. K. (A.L.P.)	Newcastle (N.S.W.)	Scholes, G. G. D. (A.L.P.)	Corio (V.)
Katter, R. C. (C.P.)	Kennedy (Q.)	Sherry, R. H. (A.L.P.)	Franklin (T.)
Keating, P. J. (A.L.P.)	Blaxland (N.S.W.)	Sinclair, Hon. I. McC. (C.P.)	New England (N.S.W.)
Kelly, Hon. C. R. (Lib.)	Wakefield (S.A.)	Snedden, Hon. B. M., Q.C. (Lib.)	Bruce (V.)
Kennedy, A. D. (A.L.P.)	Bendigo (V.)	Solomon, R. J. (Lib.)	Denison (T.)
Keogh, L. J. (A.L.P.)	Bowman (Q.)	Staley, A. A. (L.P.)	Chisholm (V.)
Killen, Hon. D. J. (Lib.)	Moreton (Q.)	Stewart, F. E. (A.L.P.)	Lang (N.S.W.)
King, R. S. (C.P.)	Wimmera (V.)	Street, A. A. (Lib.)	Corangamite (V.)
Kirwan, F. McL. (A.L.P.)	Forrest (W.A.)	Swartz, Hon. R. W. C., M.B.E., E.D. (Lib.)	Darling Downs (Q.)
Klugman, R. E. (A.L.P.)	Prospect (N.S.W.)	Turnbull, W. G., C.B.E. (C.P.)	Mallee (V.)
Luchetti, A. S. (A.L.P.)	Macquarie (N.S.W.)	Turner, H. B. (Lib.)	Bradfield (N.S.W.)
Lucock, P. E. (C.P.)	Lyne (N.S.W.)	Uren, T. (A.L.P.)	Reid (N.S.W.)
Lynch, Hon. P. R. (Lib.)	Flinders (V.)	Wallis, L. G. (A.L.P.)	Grey (S.A.)
Mackay, M. G. (Lib.)	Evans (N.S.W.)	Webb, C. H. (A.L.P.)	Stirling (W.A.)
MacKellar, M. J. R. (Lib.)	Warringah (N.S.W.)	Wentworth, Hon. W. C. (Lib.)	Mackellar (N.S.W.)
Maisey, D. W. (C.P.)	Moore (W.A.)	Whitlam, E. G., Q.C. (A.L.P.)	Werriwa (N.S.W.)
Martin, V. J. (A.L.P.)	Banks (N.S.W.)	Whittorn, R. H. (Lib.)	Balaclava (V.)
McEwen, Rt Hon. Sir John, G.C.M.G., C.H. (C.P.)	Murray (V.)		
McIvor, H. J. (A.L.P.)	Gellibrand (V.)		
McLeay, J. E. (Lib.)	Boothby (S.A.)		

(a) For later changes see Appendix.

Commonwealth referendums

In accordance with section 128 of the Constitution any proposed law for the alteration of the Constitution, in addition to being passed by an absolute majority of each House of Parliament, must be submitted to a referendum of the electors in each State, and must be approved also by a majority of the electors in a majority of the States and by a majority of all the electors who voted, before it can be presented for Royal Assent. Twenty-six such proposals have so far been submitted to referendums and the consent of the electors has been received in five cases, the first in relation to the election of Senators in 1906, the second and third in respect of State Debts—one in 1910 and the other in 1928, the fourth in respect of Social Services in 1946, and the fifth in respect of Aborigines in 1967. In addition to referendums for alteration of the Constitution, other Commonwealth referendums have been held, two prior to Federation regarding the proposed Constitution and two regarding military service during the 1914–1918 War. For details of earlier referendums see Year Book No. 52, pages 66–8.

On 1 March 1967 two Bills were introduced in the House of Representatives to alter the Constitution, one to enable the number of members of the House of Representatives to be increased without necessarily increasing the number of Senators, the other to enable the Aboriginal people to be counted in reckoning the population and to omit certain words relating to the Aboriginal race which some people felt were discriminatory. The proposed laws, after being passed by both Houses of Parliament,



were submitted to the electors of the States at referendums held on 27 May 1967. At the referendums the electors voted in all States in favour of the proposal regarding Aborigines, but rejected in all States but New South Wales the proposal for increasing the number of members of the House of Representatives. For a summary of the results of the voting on each of the proposals *see* Year Book No. 54, page 66.

Consequent upon obtaining the approval of the electors, the Constitution Alteration (Aborigines) was assented to on 10 August 1967. Section 51 of the Constitution is thereby altered by omitting from paragraph (xxvi) the words 'other than the aboriginal race in any State', and Section 127 of the Constitution is thereby repealed.

### The Parliaments of the States

This chapter contains summarised information on the Parliaments of each State, the numbers of Houses and members, and salaries payable. For greater detail, including some historical material, reference should be made to earlier Year Books, particularly No. 50, pages 69-72. Recent changes have been reported in successive issues of the Year Book.

*Membership of State Parliaments.* The following table shows the party distribution in each of the various State Parliaments at the end of 1970.

#### STATE PARLIAMENTS: MEMBERSHIP, BY PARTY AFFILIATION, 31 DECEMBER 1970

<i>Party</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>
UPPER HOUSE						
Australian Country Party (C.P.) .	12	8	..	..	8	..
Australian Labor Party (A.L.P.) .	26	9	..	4	10	2
Independent (Ind.) .	..	..	..	..	..	(a)17
Independent Labor (Ind. Lab.) .	5	..	..	..	..	..
Liberal and Country League (L.C.L.)	..	..	..	16	..	..
Liberal Party of Australia (Lib.) .	17	19	..	..	(b)12	..
Total . . . . .	60	36	(c)	20	30	19
LOWER HOUSE						
Australian Centre Party (A.C.P.) .	..	..	..	..	..	1
Australian Country Party (C.P.) .	17	8	25	..	9	..
Australian Labor Party (A.L.P.) .	40	22	31	27	23	17
Independent (Ind.) .	2	..	..	..	..	..
Independent Labor (Ind. Lab.) .	..	1	..	..	..	..
Liberal and Country League (L.C.L.)	..	..	..	20	..	..
Liberal Party of Australia (Lib.) .	35	42	20	..	(b)19	17
North Queensland Labor Party (N.Q.L.P.) . . . . .	..	..	1	..	..	..
Democratic Labor Party (D.L.P.) .	..	..	1	..	..	..
Total . . . . .	94	73	78	47	51	35

(a) In Legislative Council elections only the A.L.P. normally endorses candidates. (b) Formerly Liberal and Country League, which changed its name on 15 July 1968 to the Liberal Party of Australia (Western Australian Division) Incorporated. (c) Upper House abolished in 1922.

The Australian Country Party: Queensland, and the Country Party of Western Australia are shown above as the Australian Country Party, since they are affiliated with the Federal body.

For corresponding particulars for the Commonwealth Parliament, *see* page 70.

## Number and salary of members of the legislatures, Australian Parliaments, January 1971

## AUSTRALIAN PARLIAMENTS: MEMBERS AND ANNUAL SALARIES, 1 JANUARY 1971

Members in—	Cwltth	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
NUMBER OF MEMBERS								
Upper House . .	60	60	36	(a)	20	30	19	225
Lower House . .	125	94	73	78	47	51	35	503
Total . .	185	154	109	78	67	81	54	728
ANNUAL SALARY (\$)								
Upper House . .	(b)9,500	(c)2,395	(d)9,300	(a)	(e)7,500	(f)7,500	(g)7,200	..
Lower House . .	(b)9,500	(h)8,035	(d)9,300	(i)7,560	(e)7,500	(f)7,500	(g)7,200	..

(a) Abolished in 1922. (b) Plus expense allowances—Senators, \$2,750; Members of the House of Representatives, city electorates, \$2,750, country electorates, \$3,350. Certain additional allowances are also provided for holders of parliamentary offices, etc. (c) Plus allowance of \$1,690. An additional \$10 per day is payable to members who live outside the metropolitan area. (d) Plus allowances from \$2,400 for metropolitan to \$2,875 for urban, \$3,350 for inner country, and \$3,725 for outer country electorates. (e) Plus an allowance varying from \$1,400 to \$2,200 depending on distance from Adelaide. (f) Plus expense reimbursement ranging from \$1,600 for a metropolitan member to \$3,300 for a north province member. (g) Plus allowance according to area of electorate and distance from the capital varying from \$650 to \$1,475 in the case of the Legislative Council, and from \$1,100 to \$2,500 in the case of the House of Assembly. (h) Plus allowance varying from \$1,945 to \$2,880 according to location of electorate. (i) Plus individual electoral allowances ranging from \$1,245 to \$2,970.

## Cost of parliamentary government

The table below shows, in broad groups, the expenditure incurred in the operation of the parliamentary system in Australia, comprising the Governor-General and Governors, the Ministries, the Upper and Lower Houses of Parliament, and electoral activities; *it does not attempt to cover the expenditure on Commonwealth and State administration generally.* Only broad groups are shown, but even these are not entirely comparable because of differences in accounting procedures and in the presentation of accounts. Expenditure under the head of Governor-General or Governor includes salaries of Government House staffs and maintenance of residences, official establishments, grounds, etc., and expenditure on capital works and services.

## COST OF PARLIAMENTARY GOVERNMENT, 1969-70

(\$'000)

Expenditure group	Cwltth	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Governor-General or Governor(a)	546	265	239	183	217	141	144	1,735
Ministry(b)	636	382	168	184	143	230	204	1,947
Parliament—								
Upper House(c)	897	307	396	..	169	328	149	2,246
Lower House(c)	1,825	925	760	809	345	450	224	5,338
Both Houses(d)	4,060	1,144	1,056	531	623	549	178	8,141
Miscellaneous(e)	3,540	305	110	79	79	44	45	4,202
Total, Parliament	10,322	2,680	2,322	1,419	1,216	1,371	596	19,926
Electoral(f)	3,971	729	506	187	144	140	75	5,752
Royal Commissions, Select Committees, etc.	127	5	114	..	36	8	16	306
Grand Total	15,602	4,062	3,349	1,974	1,757	1,889	1,035	29,668

(a) Salaries and other expenses, including maintenance of house and grounds. (b) Salaries, travelling and other expenses as ministers. (c) Allowances to members (including ministers' salaries as members), travelling and other expenses. (d) Government contribution to members' superannuation funds, printing, reporting staff, library, etc. (e) Services, furniture, stores, etc. (f) Salaries, cost of elections, etc.

## COST OF PARLIAMENTARY GOVERNMENT, 1965-66 TO 1969-70

Year	Cwlth	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
TOTAL (\$'000)								
1965-66	9,323	2,494	1,985	1,546	1,285	1,451	779	18,863
1966-67	12,140	3,105	2,489	1,609	1,540	1,408	805	23,096
1967-68	12,457	3,379	2,297	1,590	1,568	1,800	929	24,020
1968-69	13,047	3,163	2,688	2,048	1,581	1,766	1,063	25,356
1969-70	15,602	4,062	3,349	1,974	1,757	1,889	1,035	29,668

## PER HEAD OF POPULATION

(\$)								
1965-66	0.81	0.59	0.62	0.93	1.19	1.73	2.11	1.64
1966-67	1.04	0.73	0.77	0.95	1.39	1.63	2.15	1.97
1967-68	1.04	0.78	0.70	0.93	1.40	2.02	2.45	2.01
1968-69	1.07	0.71	0.79	1.16	1.38	1.87	2.74	2.08
1969-70	1.25	0.90	0.98	1.11	1.52	1.96	2.65	2.38

## Commonwealth Government Departments

In Year Book No. 49 (pages 87-98) a list appears of the Commonwealth Government Departments, giving particulars of each Department, as at the end of 1962, of the principal matters dealt with and the Acts administered by the Minister concerned. Changes made during 1963 and 1966 are shown, respectively, on page 83 of Year Book No. 50 and page 74 of Year Book No. 53. Changes made during 1968 are shown in the Appendix to Year Book No. 54 (pages 1276-7). For detailed information on the organisation of the Departments and Agencies of the Commonwealth Government see the *Commonwealth Directory* (latest issue 1970).

## Enactments of the Parliaments

In the Commonwealth all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution. In the States other than South Australia and Tasmania laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly. In South Australia and Tasmania laws are enacted in the name of the Governor of the State, with the advice and consent of the Parliament in the case of South Australia, and of the Legislative Council and House of Assembly in the case of Tasmania. Generally, assent to Bills passed by the legislatures is given by the Governor-General or State Governor acting on behalf of, and in the name of, the Sovereign. In certain special cases Bills are reserved for the Royal assent. The Parliaments of the States are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States in all cases whatsoever. Subject to certain limitations they may alter, repeal, or vary their Constitutions. Where a law of a State is inconsistent with a law of the Commonwealth the latter prevails, and the former is to the extent of the inconsistency invalid.

## The course of Commonwealth legislation

The actual legislation by the Commonwealth Parliament during 1970 is indicated in alphabetical order in *The Acts of the Parliament of the Commonwealth of Australia passed during the year 1970 in the Second Session of the Twenty-seventh Parliament of the Commonwealth, with Appendix, Tables and Index*. A chronological table of Acts passed from 1901 to 1970 showing how they are affected by subsequent legislation or lapse of time is also given, and, further, a table of Commonwealth legislation passed from 1901 to 1970 in relation to the several provisions of the Constitution is furnished in the same volume. Reference should be made to these for complete information.



The Acts passed by the Commonwealth Parliament during the year 1970 are listed on pages 77–82. In many cases the title of the Act indicates the general scope of the Act, but brief explanatory notes have been added where necessary. Appropriate chapters of this Year Book should be referred to for further information which may be available there.

The total enactments of the Commonwealth Parliament for a number of years at fairly even intervals since 1901 show a general increase. Seventeen Acts were passed in 1901, 36 in 1914, 38 in 1927, 87 in 1939, 109 in 1952, 156 in 1965, 157 in 1968, and 126 in 1970.

*Commonwealth legislation passed during 1970*

*Agricultural Tractors Bounty Act* 1970 (No. 86) provided, in addition to assistance already provided under the *Agricultural Tractors Bounty Act* 1966, temporary assistance to local manufacturers producing tractors eligible for bounty.

*Air Accidents (Commonwealth Liability) Act* 1970 (No. 56) amended the Air Accidents (Commonwealth Liability) Act to bring the limits of liability of the Commonwealth or Commonwealth authorities into line with the new limits of the Civil Aviation (Carriers' Liability) Act.

*Anglo-Australian Telescope Agreement Act* 1970 (No. 57) established the Anglo-Australian Telescope Board as a statutory authority; regulated appointment of the Australian members to the Board; and provided for the appropriation of moneys and their application by the Board.

*Appropriation Act* (No. 3) 1969–70 (No. 10).

*Appropriation Act* (No. 4) 1969–70 (No. 11).

*Appropriation Act* (No. 1) 1970–71 (No. 94).

*Appropriation Act* (No. 2) 1970–71 (No. 95).

*Asian Development Bank (Special Funds Contributions) Act* 1970 (No. 113) provided for a contribution by Australia of the equivalent of \$US10 million to the special funds of the Asian Development Bank.

*Australian Film Development Corporation Act* 1970 (No. 21) established the Corporation which administers a fund of \$1 million from which loans are made to film and television producers.

*Australian Film Development Corporation Act* (No. 2) 1970 (No. 123) provided for the fixing of remuneration for members of the Australian Film Development Corporation.

*Australian Industry Development Corporation Act* 1970 (No. 15) established the Corporation which is designed to provide financial assistance to economically viable Australian industries through funds raised principally from outside Australia; aimed at developing Australian industry and maximising Australian ownership.

*Australian Institute of Marine Science Act* 1970 (No. 19) established the Institute of Marine Science in Townsville, Queensland and appointed an Interim Council to make recommendations on the functions and powers of the Institute.

*Australian National Airlines Act* 1970 (No. 55) repealed Section 66 of the *Australian National Airlines Act* 1945–1966 so that the liability of the Australian National Airlines Commission is brought into line with the normal common law situation.

*Australian Wool Commission Act* 1970 (No. 103) established the Australian Wool Commission, a statutory body consisting of seven members, empowered to operate a flexible reserve price scheme for wool sold at auction and to perform a number of other functions relating to the whole clip aimed at improving the marketing of Australian wool.

*Bankruptcy Act* 1970 (No. 122) amended the Bankruptcy Act to remove any obstacle the Act may present to the operation of compositions or schemes of arrangement entered into under State or Territory legislation providing assistance to farmers in respect of their debts.

*Book Bounty Act* 1970 (No. 58) enabled bounty to be paid on approved books manufactured by private enterprise for the Commonwealth or State.

*Canberra College of Advanced Education Act* 1970 (No. 114) amended the *Canberra College of Advanced Education Act* 1967 by enabling the College to award degrees and by altering Council membership: to provide for student representation; to increase teaching staff representation; and varying the Australian National University representation.

*Canned Fruits Export Marketing Act* 1970 (No. 29) enabled canners to be paid from the Canned Fruit Excise Fund a proportion of the excise paid by them from 1 January 1969 to 27 March 1969.

*Cellulose Acetate Flake Bounty Act* 1970 (No. 68) extended the operation of the *Cellulose Acetate Flake Bounty Act* 1956–1969 for a maximum period of 6 months from 1 July 1970 to 31 December 1970 unless an earlier date of cessation is specified by proclamation.

*Commonwealth legislation passed during 1970—continued*

*Civil Aviation (Carriers' Liability) Act 1970* (No. 54) amended the *Civil Aviation (Carriers' Liability) Act 1959–1962* by increasing the limits of liability from \$15,000 to \$30,000 for death or injury to passengers and by bringing charter flights and commuter services within the scope of the Act.

*Civil Aviation (Offenders on International Aircraft) Act 1970* (No. 17) aligned Australian law with the Tokyo Convention on offences and other acts committed on board international aircraft and approved accession by Australia to the Convention.

*Commonwealth Air Navigation Facilities and Services Act 1970* (No. 105) amended the *Air Navigation (Charges) Act 1969* by increasing the level of Australian air navigation charges to general aviation aircraft and by revising the schedule dealing with charges payable by operators of private, aerial work and charter aircraft.

*Commonwealth Places (Application of Laws) Act 1970* (No. 121) applied as Commonwealth law, the provisions of State laws that are not applicable by reason of Section 52 (i) of the Constitution: i.e. State laws in civil and criminal matters now apply in those places acquired by the Commonwealth for public purposes.

*Commonwealth Serum Laboratories Act 1970* (No. 42) authorised the Commonwealth Serum Laboratories Commission to import and sell vaccines to the Commonwealth, for the purpose of immunisation campaigns.

*Conciliation and Arbitration Act 1970* (No. 53) changed the sanctions provisions, i.e. the 'penal clauses', of the Conciliation and Arbitration Act.

*Customs Tariff Act 1970* (No. 36).

*Customs Tariff Act* (No. 2) 1970 (No. 82).

*Customs Tariff Validation Act 1970* (No. 104).

*Dairying Industry Act 1970* (No. 47) amended the *Dairying Industry Act 1962–1967* to enable the payment of the stabilisation bounty on the production of all butter and cheese on which a levy has been imposed.

*Dairying Industry Equalisation Act 1970* (No. 45) established a Dairy Produce Equalisation Trust Account into which equivalent amounts collected as levy and provisional levy under the Dairying Industry Levy Act could be paid.

*Dairying Industry Equalisation Legislation Referendum Act 1970* (No. 46) made legislative arrangements for a referendum on the questions of whether the Dairying Industry Levy Act, the Dairying Industry Levy Collection Act and the Dairying Industry Equalisation Act should be brought into operation.

*Dairying Industry Levy Act 1970* (No. 43) gave effect to proposals submitted by the Australian Dairy Industry Council to provide statutory support to the present dairying industry equalisation scheme.

*Dairying Industry Levy Collection Act 1970* (No. 44) made possible the collection of the levy and the provisional levy imposed under the *Dairying Industry Levy Act 1970*.

*Dartmouth Reservoir Agreement Act 1970* (No. 7) provided for parliamentary approval for an agreement between the Commonwealth, New South Wales, Victoria, and South Australia to provide Commonwealth financial assistance towards the cost of construction of the Dartmouth reservoir.

*Defence Act 1970* (No. 33) amended the Defence Act enabling the pay and annual allowances of the Chairman, Chiefs of Staff Committee, the Chief of Naval Staff, the Chief of the General Staff and the Chief of the Air Staff to be as Parliament provides.

*Defence Forces Retirement Benefits Act 1970* (No. 34) amended the formula that determines the category entitlements of more senior members contributing under the Defence Forces Retirement Benefits Act.

*Delivered Meals Subsidy Act 1970* (No. 5) provided for a subsidy of \$1 to be paid to approved organisations, for every ten meals delivered in the preceding calendar year to assist in the establishment, improvement, etc. of delivered meal services.

*Diesel Fuel Tax Act* (No. 1) 1970 (No. 79) amended the *Diesel Fuel Tax Act* (No. 1) 1957–1966 by varying the rate of tax collected on diesel fuel sold or disposed of to a person who is not a certificate holder and is therefore not entitled to receive a concession.

*Diesel Fuel Tax Act* (No. 2) 1970 (No. 80) amended the *Diesel Fuel Tax Act* (No. 2) 1957–1966 by varying the rate of tax to be collected on diesel fuel used in propelling a road vehicle on a public road.

*Commonwealth legislation passed during 1970—continued*

*Dried Fruits Exports Charges Act* 1970 (No. 18) increased the maximum rate of charge that can be imposed under the *Dried Fruit Export Charges Act* 1924–1965 from 0.1 cents to 0.3 cents per pound and retained the provision for a lower operative rate of charge.

*Education Research Act* 1970 (No. 112) increased the amount of Commonwealth financial assistance given to educational research in Australia.

*Estate Duty Assessment Act* 1970 (No. 9) amended the Estate Duty Assessment Act by providing relief from duty on estates of deceased primary producers.

*Excise Tariff Act* 1970 (No. 81) amended the Excise Tariff Act in accordance with Excise Tariff Proposals No. 1 by increasing excise duties imposed on manufactured tobacco products and certain refined petroleum products; imposing a duty on grape wine for the first time; and removing excise duties that previously applied to spirits used to fortify wine.

*Export Payments Insurance Corporation Act* 1970 (No. 24) amended the *Export Payments Insurance Corporation Act* 1956–1966, enabling the Corporation to offer payments and insurance on, and guarantees relating to exports to External Territories; and increasing maximum liabilities which the Corporation may accept under payments insurance and guarantees to \$100 million and under overseas investment insurance to \$60 million.

*Export Payments Insurance Corporation Act* (No. 2) 1970 (No. 124) fixed the salaries of the Commissioner and Acting Commissioner of the Export Payments Insurance Corporation.

*Fisheries Act* 1970 (No. 93) permitted the States to enact legislation requiring the licensing of premises used for processing fish for either domestic consumption or export.

*Gladstone Power Station Agreement Act* 1970 (No. 28) approved an \$80 million loan, by the Commonwealth to the Queensland State Government, towards the construction of a power station at Gladstone.

*Gold-Mining Industry Assistance Act* 1970 (No. 91) extended the Gold-Mining Assistance Act for a further 3 years from 1 July 1970.

*Handicapped Children (Assistance) Act* 1970 (No. 27) provided a Federal subsidy of \$2 for every \$1 subscription from private or local government funds, for capital expenditure on training institutions for handicapped children.

*Home Savings Grant Act* 1970 (No. 14) amended the *Home Savings Grant Act* 1964–1967 by raising the limit on the value of a home from \$15,000 to \$17,500 for the purposes of the grant; widening the forms of savings and extending the classes of eligible persons.

*Income Tax Act* 1970 (No. 88).

*Income Tax Assessment Act* 1970 (No. 87).

*Income Tax (Partnerships and Trusts) Act* 1970 (No. 89).

*International Monetary Agreement Act* 1970 (No. 25) increased Australia's quota with the International Monetary Fund, and authorised payment.

*Lighthouses Act* 1970 (No. 106) ensured that the Act applied to a wider and more sophisticated range of marine navigational aids now in use and likely to be installed in the future.

*Loan Act* 1970 (No. 31).

*Loan (Australian Wheat Board) Act* 1970 (No. 3) authorised the Commonwealth to repay, as guarantor, the loans of the Australian Wheat Board for the 1968–69 wheat crop to the Reserve Bank of Australia.

*Loan (Defence) Act* 1970 (No. 37) approved Commonwealth borrowing, up to \$US100 million, for the purchase of general defence equipment in the United States.

*Loan (Defence) Act* (No. 2) 1970 (No. 127) authorised the Commonwealth to borrow up to \$US125 million from the Export-Import Bank of the United States, for purchase of defence equipment in the U.S.A.

*Loan (Housing) Act* 1970 (No. 96) authorised the borrowing of \$142.6 million for the purposes of the Commonwealth and State Housing Agreement.

*Loan (War Service Land Settlement) Act* 1970 (No. 40) enabled the raising of loans (\$4.5 million) for war service land settlement during 1969–70 in Western Australia, South Australia and Tasmania.

*Marginal Dairy Farms Agreement Act* 1970 (No. 35) made available up to \$25 million, over 4 years for the marginal dairy farms reconstruction scheme.



*Commonwealth legislation passed during 1970—continued*

*Metric Conversion Act* 1970 (No. 16) established a Metric Conversion Board responsible for planning and facilitating the conversion from the Imperial system to the Metric system of measurement.

*National Health Act* 1970 (No. 41) enabled the payment of higher rates of Commonwealth and fund medical benefits, introduced new measures for administration of registered medical and hospital benefits organisations and, provided additional assistance for the health insurance of families on low incomes.

*Navigation Act* 1970 (No. 1) provided the legislative power for six months to deal with vessels and their cargoes where there is pollution or threat of pollution by oil to the Australian coast or coastal water.

*Navigation Act* (No. 2) 1970 (No. 117) reintroduced the provisions inserted in the *Navigation Act* 1970 and introduced new provisions which compelled the owner of a loaded tanker to meet the Commonwealth's cost of cleaning up any spill that his vessel caused; permitted a tanker owner to limit his liability in accordance with the Brussels Convention, and applied the Act's provisions to all oils.

*Papua and New Guinea Loan (International Bank) Act* 1970 (No. 107) approved a Commonwealth guarantee of \$US4.5 million or \$A4 million for a loan made to the Territory of Papua and New Guinea by the International Bank for Reconstruction and Development.

*Parliamentary Allowances Act* 1970 (No. 22) revised the second schedule to the *Parliamentary Allowances Act* 1952–1968 and listed the electorates for which the lower electoral allowance is payable.

*Parliamentary Counsel Act* 1970 (No. 8) established a statutory organisation responsible for all legislative drafting.

*Phosphate Fertilizers Bounty Act* 1970 (No. 115) amended the *Phosphate Fertilizers Bounty Act* 1969 to provide for retrospective payment of bounty on unsold stocks held by resellers on 12 August 1969.

*Port Augusta to Whyalla Railway Act* 1970 (No. 23) approved an agreement between the Commonwealth and South Australia for the construction by the Commonwealth of a new standard gauge railway between Port Augusta and Whyalla.

*Post and Telegraph Act* 1970 (No. 63) increased charges for Post Office services.

*Post and Telegraph Rates Act* 1970 (No. 62) amended the *Post and Telegraph Rates Act* to adjust postal and telegraph charges.

*Processed Milk Products Bounty Act* 1970 (No. 48) amended the *Processed Milk Products Bounty Act* 1962–1968 and enabled the alternative formula in the Dairying Industry Act to be used to determine the rate of bounty payable for exported processed milk products.

*Processed Milk Products Bounty Act* (No. 2) 1970 (No. 92) amended the *Processed Milk Products Bounty Act* 1962–1970 to provide for payment of \$3.4 million export bounty on processed milk products exported in 1970–71.

*Pyrates Bounty Act* 1970 (No. 67) extended the operation of the *Pyrates Bounty Act* 1960–1969 to 31 December 1970 unless an earlier date of cessation is specified by proclamation.

*Queensland Grant (Bundaberg Irrigation Works) Act* 1970 (No. 32) provided for a Commonwealth grant of up to \$12.8 million to Queensland for water conservation works in the Bundaberg region.

*Repatriation Act* 1970 (No. 4) provided for single rates of pension to be paid to married service pensioners who are forced to enter nursing homes, through illness or infirmity.

*Repatriation Act* (No. 2) 1970 (No. 60) increased rates of pension for TPI, war widows, war orphans, and enabled additional Repatriation Boards to be appointed.

*River Murray Waters Act* 1970 (No. 6) ratified an amendment to the *River Murray Waters Agreement* to provide for the construction of a major storage dam near Dartmouth on the Mitta Mitta River as the next major development of the River Murray System.

*Sales Tax Act* 1970 (No. 69).

*Sales Tax Act* (No. 2) 1970 (No. 70).

*Sales Tax Act* (No. 3) 1970 (No. 71).

*Sales Tax Act* (No. 4) 1970 (No. 72).

*Sales Tax Act* (No. 5) 1970 (No. 73).

*Sales Tax Act* (No. 6) 1970 (No. 74).

*Commonwealth legislation passed during 1970—continued*

*Sales Tax Act* (No. 7) 1970 (No. 75).

*Sales Tax Act* (No. 8) 1970 (No. 76).

*Sales Tax Act* (No. 9) 1970 (No. 77).

*Sales Tax (Exemptions and Classifications) Act* 1970 (No. 78).

*Seamen's Compensation Act* 1970 (No. 49) increased rates and amounts of workers' compensation payable to seamen under the *Seamen's Compensation Act*.

*Seamen's War Pensions and Allowances Act* 1970 (No. 61) brought the rates of pensions and allowances payable to seamen war pensioners under the *Seamen's War Pensions and Allowances Act* into line with similar rates payable to other war pensioners under the *Repatriation Act*.

*Seat of Government (Administration) Act* 1970 (No. 90) enabled ordinances of the Australian Capital Territory to have extra-territorial effect.

*Sheltered Employment (Assistance) Act* 1970 (No. 84) subsidised the capital cost of accommodation for disabled persons working in normal industry, paid a training fee in respect of persons placed in normal employment by a sheltered workshop organisation, and subsidised salaries of certain sheltered workshop staff.

*Social Services Act* 1970 (No. 2) provided that where either or both members of a pensioner married couple are forced, through illness or infirmity, to enter a nursing or similar type home, they may receive single rates of pension at the discretion of the Director-General of Social Services.

*Social Services Act* (No. 2) 1970 (No. 59) increased the standard married and widows' rates of pensions by 50c. a week and introduced a long-term sickness benefit at a higher rate than the old scale.

*Snowy Mountains Engineering Corporation Act* 1970 (No. 39) set up the Snowy Mountains Engineering Corporation to carry out on a continuing basis the engineering consulting services which the Snowy Mountains Hydro-electric Authority had been providing for some years.

*Snowy Mountains Engineering Corporation Act* (No. 2) 1970 (No. 125) fixed the salary of the Assistant Directors of the Snowy Mountains Engineering Corporation at the rate of \$15,592 a year.

*States Grants (Aboriginal Advancement) Act* 1970 (No. 116).

*States Grants Act* 1970 (No. 109).

*States Grants (Advanced Education) Act* 1970 (No. 118).

*States Grants (Capital Assistance) Act* 1970 (No. 111).

*States Grants (Debt Charges Assistance) Act* 1970 (No. 110).

*States Grants (Mental Health Institutions) Act* 1970 (No. 83).

*States Grants (Special Assistance) Act* 1970 (No. 119).

*States Grants (Receipts Duty) Act* 1970 (No. 102).

*States Grants (Special Financial Assistance) Act* 1970<sup>a</sup> (No. 30).

*States Grants (Teachers Colleges) Act* 1970 (No. 26).

*States Grants (Universities) Act* 1970 (No. 20).

*States Grants (Universities) Act* (No. 2) 1970 (No. 120).

*States Grants (Water Resources Measurements) Act* 1970 (No. 108).

*States Receipts Duties (Administration) Act* 1970 (No. 97).

*States Receipts Duties (Exemption) Act* 1970 (No. 101).

*States Receipts Duty Act* (No. 1) 1970 (No. 98).

*States Receipts Duty Act* (No. 2) 1970 (No. 99).

*States Receipts Duty Act* (No. 3) 1970 (No. 100).

*Stevedoring Industry (Temporary Provisions) Act* 1970 (No. 52) extended the period of operation of the *Stevedoring Industry (Temporary Provisions) Act* 1967-68 to 1 July 1972.

*Stevedoring Industry (Temporary Provisions) Act* (No. 2) 1970 (No. 126) fixed the salary for the Director of the Australian Stevedoring Industry Authority.

*Sulphate of Ammonia Bounty Act* 1970 (No. 65) extended the operation of the *Sulphate of Ammonia Bounty Act* 1962-1969 to 31 December 1970 unless an earlier date of cessation is specified by proclamation.

*Commonwealth legislation passed during 1970—continued*

*Sulphuric Acid Bounty Act* 1970 (No. 66) extended the operation of the *Sulphuric Acid Bounty Act* 1954–1969 to 31 December 1970, unless an earlier date of cessation is specified by proclamation.

*Supply Act* (No. 1) 1970–71 (No. 12).

*Supply Act* (No. 2) 1970–71 (No. 13).

*Urea Bounty Act* 1970 (No. 64) extended the operation of the *Urea Bounty Act* 1966–1969 to 31 December 1970 unless an earlier date of cessation is specified by proclamation.

*Wheat Industry Stabilisations Act* 1970 (No. 38) amended the *Wheat Industry Stabilisation Act* by implementing a quota scheme for wheat deliveries and giving discretionary authority to the Australian Wheat Board to sell wheat at lower prices in Australia for purposes other than human consumption.

*Wireless Telegraphy Regulations Act* 1970 (No. 85) increased the licence fees for radio communication stations from \$2 for all stations, to \$10 for land and fixed stations, and \$6 for mobile, amateur and receiving stations. Ambulance, rural fire brigades and stations operating as out-post services in Australia and the Territory of Papua and New Guinea will continue to pay the old fee.

*Wool Industry Act* 1970 (No. 50) amended the *Wool Industry Act* 1962–67 giving effect to new arrangements for the financing of wool research and promotion and widening the borrowing powers of the Australian Wool Board.

TOTAL FOR YEAR: 126 Acts.



## CHAPTER 4

### DEFENCE

#### Department of Defence

##### Functions of Department of Defence

The functions of the Department of Defence include: defence policy; joint Service matters and matters having an inter-departmental defence aspect; the financial requirements of defence policy and the allocation of the funds made available; the supply aspect of defence policy including the review of production programmes and capacity; important matters of policy or principle affecting the Defence Forces and their requirements, including the strength, organisation and disposition of the forces, higher appointments in the Services, their weapons and equipment, and defence research and development.

##### Organisation, higher defence machinery, and the control of the joint Service machinery

The joint Service and inter-departmental advisory machinery of the Department consist of various committees and joint staffs headed by the Defence Committee, the Chiefs of Staff Committee, the Defence (Administration) Committee, and the Defence (Industrial) Committee.

The *Defence Committee* is a statutory body consisting of the Secretary, Department of Defence, who is Chairman; the Chairman of the Chiefs of Staff Committee; the Chiefs of Staff of the three Services; the Secretary, Department of the Prime Minister and Cabinet; the Secretary, Department of Foreign Affairs; and the Secretary to the Treasury. Its function is to advise the Minister for Defence on: the defence policy as a whole and the co-ordination of military, strategic, economic, financial, and foreign affairs aspects of defence policy; matters of policy or principle and important questions having a joint Service or an inter-departmental defence aspect; and such other matters having a defence aspect as are referred to the Committee by or on behalf of the Minister for Defence.

The *Chiefs of Staff Committee* meets regularly for the discussion of technical military matters on a joint service basis, and is responsible in peace for the preparation of military appreciations and plans. The principal functions of the *Defence (Administration) Committee* are the regular review of the progress of the Defence Programme and overall Defence Vote control.

The *Defence (Industrial) Committee* co-ordinates and makes recommendations regarding the capabilities of Australian industry to meet the material requirements of the Services in peace and war. Members of the Defence Business Board are co-opted as necessary for specific subjects. The *Defence Business Board* is constituted to advise on business matters of common interest to the three Services, or important subjects on which the collective advice of the Board is desired from the business aspect, with a view to promoting efficiency and economy in the execution of the Defence Programme. The Board comprises businessmen who serve in a part-time honorary capacity. Three of the members also serve as business advisers to the separate Service Departments.

There have been many far reaching changes in the Defence administration over the past three years. These are designed to provide the Government with the best possible advice in making decisions on defence policy by ensuring that all proposals have been thoroughly examined and that the best available military, strategic, technological, intelligence and economic advice is provided. These changes include the establishment of a Joint Staff, the strengthening of the Defence Science Organisation, the establishment of a Joint Intelligence Organisation, strengthening of the Programme Management and Defence Facilities Division, and other areas of the department to provide greater capacity, the introduction of systems analysis and the introduction of the five year rolling programme system based on the concepts of planning-programming-budgeting.

Courses at the new Australian Joint Services Staff College commenced in January 1970. Attended by senior officers of the Armed Services and appropriate civilian departments and including students from New Zealand, the six-month course extends beyond purely military matters to include studies on socio-economic-political aspects, countries to our North and modern management practices. The objective is to produce officers well equipped for higher command and staff appointments.

### Basis of current defence policy

The primary aim of Australian defence policy is to ensure the security of Australia and her Territories.

Because of the close link between Australian security and wider regional security, Australian policy stresses not only immediate direct defence, but also progress and stability in nearby countries, particularly in the south-east Asian area. In concert with our major allies and in keeping with our resources, Australia continues to make an active military contribution to collective defence arrangements in the area—SEATO, ANZUS and the Five-Power arrangements in Malaysia and Singapore—with the aim of supporting secure and stable independent nation States in south-east Asia with which Australia can establish co-operative relations.

At present Australian forces are on active overseas service in South Vietnam, together with the United States and other allies.

Australia has long-standing defence links with Malaysia and Singapore. The Australian Government, in association with the United Kingdom and New Zealand, will maintain forces of all arms in the area so long as their presence is actively desired by the two governments concerned. The presence of these forces and their participation in training and military exercises with Malaysian and Singaporean troops will aid the development of the indigenous defence capacity of the two countries as well as providing additional security while that capacity is built up.

### New Programming concept

The year 1969–70 marks the change from the period defence programme concept to a continuous ‘rolling’ programme. In addition, the forward view has been projected ahead for five years rather than for three years as in the previous fixed programmes.

Each year another year—the fifth year forward—will be added to the programme in conjunction with an annual review of defence plans and policies. Because of the continuity thus provided, the consideration of major defence investment proposals will progress continuously rather than in a peak of activity in either annual or triennial cycles.

At the same time proposals can be considered against the background of a five year projection of defence expenditure as a whole in relation to the pressure thus placed on financial and other resources.

### Personnel strengths

Of the Army strength some 16,000 are national servicemen. The selective national service scheme is in its sixth year of operation and continues to be essential for the maintenance of Army strength.

#### PERSONNEL STRENGTHS OF DEFENCE FORCES, JUNE 1961 TO 1971

##### NAVY

<i>Strength at June—</i>	<i>Permanent forces</i>	<i>Citizen forces</i>	<i>Emergency reserves</i>	<i>Total</i>
1961 . . . . .	10,722	7,770	..	18,492
1962 . . . . .	11,103	6,424	..	17,527
1963 . . . . .	11,663	5,433	..	17,096
1964 . . . . .	12,569	5,202	..	17,771
1965 . . . . .	13,503	3,762	443	17,708
1966 . . . . .	14,714	3,797	686	19,197
1967 . . . . .	15,893	3,931	793	20,617
1968 . . . . .	16,454	4,047	904	21,405
1969 . . . . .	16,943	3,971	1,114	22,028
1970 . . . . .	17,304	4,462	897	22,663
Estimated strength at June 1971 . . . . .	17,820	4,330	798	22,948

PERSONNEL STRENGTHS OF DEFENCE FORCES  
JUNE 1961 TO 1971—*continued*

## ARMY

<i>Permanent forces</i>					
<i>Strength at June—</i>	<i>Australian Regular Army</i>	<i>Pacific Islands Regiment</i>	<i>Citizen forces</i>	<i>Emer- gency reserves</i>	<i>Total</i>
1961 . . . . .	19,878	581	26,958	..	47,417
1962 . . . . .	20,985	638	30,041	..	51,664
1963 . . . . .	21,944	695	27,341	..	49,980
1964 . . . . .	22,681	812	27,505	..	50,998
1965 . . . . .	25,314	1,415	28,146	288	55,163
1966 . . . . .	32,702	1,732	32,046	662	67,142
1967 . . . . .	41,464	2,246	34,670	889	79,269
1968 . . . . .	42,944	2,406	35,762	1,031	82,143
1969 . . . . .	44,051	2,474	34,256	981	81,762
1970 . . . . .	44,533	2,434	31,397	822	79,186
Estimated strength at June					
1971 . . . . .	45,200	2,560	36,000	500	84,260

## AIR FORCE

<i>Strength at June—</i>	<i>Permanent forces</i>	<i>Citizen forces</i>	<i>Emergency reserves</i>	<i>Total</i>
1961 . . . . .	15,592	671	..	16,263
1962 . . . . .	15,815	765	..	16,580
1963 . . . . .	15,840	788	..	16,628
1964 . . . . .	16,564	926	..	17,490
1965 . . . . .	17,720	724	26	18,470
1966 . . . . .	19,358	865	170	20,393
1967 . . . . .	20,130	1,059	303	21,492
1968 . . . . .	21,564	907	397	22,868
1969 . . . . .	22,712	902	467	24,081
1970 . . . . .	22,642	841	668	24,151
Estimated strength at June				
1971 . . . . .	22,700	950	748	24,398

**Equipment**

An amount of \$184.4m was spent on equipment of a capital nature in 1969–70; this included \$31m under credit arrangements with the United States Government. An amount of \$163.3m is expected to be spent in 1970–71 of which \$49.3m will be under the credit arrangements with the United States Government.

The major equipment items received in 1969–70 by the Services included: ships (1 River Class destroyer, 1 Oberon submarine); aircraft (1 Orion, 21 Macchi, 1 HS748 navigator trainer, 1 Caribou, 1 Pilatus Porter, 1 helicopter); and a large quantity of military vehicles and equipment.

Approval was given by the Government for orders to be placed in 1970–71 for such major capital equipment items as 2 Oberon submarines, 10 Skyhawk aircraft, 2 support and training aircraft and 9 helicopters for the Navy; a logistic cargo ship and 75 helicopters for the Army; 42 helicopters, 11 helicopter gunships and 6 training aircraft for the R.A.A.F. In addition, 24 F4-E aircraft have been leased to provide an interim strike force.

**Research and development**

The laboratories of the Department of Supply together with the Services' own technical establishments, have continued to work on projects and investigations in support of Service needs. A new agreement with the United Kingdom has been negotiated for the conduct of the Woomera Range and its associated technical facilities, and collaborative programmes in space tracking and other selected topics have been arranged with the United States of America.



## Defence expenditure

DEFENCE EXPENDITURE, BY DEPARTMENT OR SERVICE, 1965-66 TO 1970-71  
(\$'000)

	<i>Defence(a)</i>	<i>Navy</i>	<i>Army</i>	<i>Air</i>	<i>Supply</i>	<i>Other</i>	<i>Total</i>
<b>Actual expenditure—</b>							
1965-66 . . . . .	14,040	170,622	261,752	218,109	71,364	11,969	747,856
1966-67 . . . . .	18,081	202,607	352,837	281,011	80,312	15,240	950,088
1967-68 . . . . .	17,492	223,492	381,019	378,615	90,038	18,877	1,109,533
1968-69 . . . . .	19,077	232,327	410,621	382,559	90,482	29,631	1,164,697
<b>1969-70—</b>							
Total . . . . .	23,440	241,140	409,386	301,162	94,091	33,841	1,103,060
less United States credits . . . . .	..	15,807	9,781	20,798	529	..	46,915
Payments from appropriations . . . . .	23,440	225,333	399,605	280,364	93,562	33,841	1,056,145
<b>Estimated Expenditure—</b>							
<b>1970-71—</b>							
Total . . . . .	23,724	243,010	413,889	312,791	102,299	41,275	1,136,988
less United States credits . . . . .	..	26,122	11,377	39,792	339	..	77,630
Payments from appropriations . . . . .	23,724	216,888	402,512	272,999	101,960	41,275	1,059,358

(a) Includes defence aid for Malaysia and Singapore.

## Logistic arrangement with United States Government

A logistic arrangement agreed with the United States Government in respect of Australian equipment purchases continues to operate. The logistic arrangement is in effect a 'package deal' covering all the items required instead of negotiating each separate purchase as it arises, and by this method Australia has obtained more advantageous financial terms together with assurances of better delivery dates to meet our requirements. Under this arrangement, instead of paying for the equipment roughly in line with deliveries, the Government is enabled to spread payments over an extended period.

## Reserve and Citizen Forces

Citizen and Reserve Forces may be called out by proclamation for continuous full-time service in a 'Time of Defence Emergency'. The particular circumstances giving rise to the proclamation of a time of defence emergency could be varied, but would occur in a situation where the Regular Forces needed the full-time support of the Citizen and Reserve Forces in hostilities short of general war.

The three Services also have volunteer Emergency Reserves which may be called out for continuous full-time service when they are needed. These reserves provide a ready means of supplementing and reinforcing operational units.

## Australian forces serving overseas

In response to an invitation of the Government of South Vietnam Australia has provided forces since 1962 to assist in the defence of that country. The number of men involved was increased progressively reaching 8,000 in the first half of 1968, and remained at approximately that level until November 1970 when approximately 1,000 men were withdrawn. In March 1971 it was announced that a further reduction of about 1,000 men would be made over a four to six month period commencing in May 1971. This further withdrawal will reduce the total force to about 6,000 men.

In December 1970, the Australian force in Vietnam comprised:

Navy—a destroyer, a clearance diving team, and pilots, ground crew, and supporting personnel.

Army—a task force of two infantry battalions, a Centurion tank squadron, an artillery field regiment and their combat support units; a logistic support force; and a 99-man Army Training Team.

Air Force—a squadron of eight Canberra bombers, a squadron of sixteen Iroquois helicopters, and a squadron of six Caribou transport aircraft.

In Malaysia and Singapore progressive arrangements and redeployments of Australian forces are taking place, which will be completed by the end of 1971. The forces which Australia, together with New Zealand, will retain in the area will consist of:

**Navy**—two naval ships, one R.A.N. and the other R.N.Z.N., which will be present in the area at all times.

**Army**—in conjunction with New Zealand a ground force based on a two battalion organisation, to which Australia will contribute approximately 1,200 men, located in Singapore and with one company detached on rotation to Butterworth.

**Air Force**—two squadrons of Mirage fighters, from which eight aircraft will be detached to Tengah in Singapore, and the remainder based at Butterworth in Malaysia.

#### Defence support aid

In support of Australia's strategic policy of contributing to the common defence of south-east Asia, the Government provides substantial financial aid to our Asian allies. This aid is given in the forms of civil aid and technical assistance, as well as direct defence assistance to support the armed forces of these countries and to increase their defence capability.

Under the SEATO Aid programme assistance to the extent of \$2,700,000 will be provided for South Vietnam, Thailand, Pakistan, and the Philippines during 1970–71. Malaysia and Singapore are also being further assisted to strengthen their defence capabilities by the extension of the aid programme commenced in 1964 under which the Australian Government has provided some \$45 million to date and will provide a further \$20 million over the period 1971–1974. Aid to Malaysia has included ammunition, military vehicles, weapons, small craft, engineer equipment, and general stores. Malaysian servicemen will continue to be trained in Australia and in the Malaysian area, and the seconding of Australian servicemen to the Malaysian armed forces will also be continued.

Australia will undertake a comprehensive programme of military, civic action, and defence support aid to South Vietnam at a cost of \$3.3 million. This aid will embrace an expansion of the Australian military training and advisory role, the establishment of an Australian-sponsored Jungle Warfare Training Centre at Nui Dat, military equipment for the South Vietnamese forces, and an expanded participation by military personnel in civic action and related activities.

Australia is providing Cambodia with items of a logistic support nature within a budgeted total aid expenditure for Cambodia in 1970–71 of about \$1.9 million. Defence support and dual-purpose items, such as land rovers, communications equipment and arms and ammunition, are being supplied under this programme at a cost of \$600,000.

### Naval defence

Prior to 1901, naval defence systems were organised under the State Governments. Information regarding these systems is given in Year Book No. 2, page 1084. An outline of the development of Australian naval policy is given in Year Books No. 3, page 1060, and No. 12, page 1012. An account appears in Year Book No. 15, pages 921–3, of the building of the Australian Navy, its costs, the compact with the Imperial Government, and other details. The growth and the activities of the Royal Australian Navy during the 1939–45 War are shown in Year Book No. 36, pages 1023–7.

Under the provisions of the Commonwealth of Australia Constitution Act the Minister of State for the Navy administers the Department of the Navy. Under the *Naval Defence Act* 1910–1966 the Royal Australian Navy is administered by the Naval Board. The Naval Board consists of the Minister as President, four Naval Members, and the Secretary to the Department of the Navy.

Strong links with the Royal Navy are maintained by a constant exchange of officers for extended tours of duty and by a full exchange of information and ideas. A liaison staff is maintained by the Royal Australian Navy in London and by the Royal Navy in Australia. Advanced training and staff courses in the United Kingdom are provided by the Royal Navy for Royal Australian Navy officers. A liaison staff is also maintained by the Royal Australian Navy in Washington, and a comprehensive exchange of information is provided by this link. Staff courses in the United States are also attended by officers of the Royal Australian Navy.

#### Ships of the Royal Australian Navy

*In commission, December 1970:* Melbourne—aircraft carrier; Sydney—transport; Supply—oiler; Stalwart—destroyer tender; Perth, Hobart and Brisbane—guided missile destroyers; Vendetta, Duchess, Anzac—destroyers; Yarra, Parramatta, Stuart, Derwent, Swan, Queenborough—destroyer escorts; Hawk—coastal minesweeper; Curlew—coastal minehunter; Moresby, Paluma—surveying ships; Diamantina, Kimbla—oceanographic research ships; Oxley, Otway, Onslow, Owens—

submarines; *Attack, Aitape, Acute, Adroit, Advance, Archer, Ardent, Arrow, Assail, Aware, Barbette, Barricade, Bayonet, Bombard, Buccaneer, Ladava, Lae, Madang, Samarai*—patrol boats; *Banks, Bass*—auxiliaries; *Jeparit*—transport.

*In reserve, December 1970: Tobruk*—destroyer; *Quiberon, Quickmatch*—destroyer escorts; *Gascoyne, Barcoo*—oceanographic research ships; *Culgoa*—barrack ship; *Teal, Gull, Snipe, Ibis*—coastal minesweepers; *Bandolier*—patrol boat; *Castlemaine*—ocean minesweeper; *Sprightly*—fleet tug; *Kara Kara*—boom gate vessel.

*On service overseas.* During the year ended December 1970 the following ships served in south-east Asian waters as units of the Commonwealth Strategic Reserve with headquarters in Singapore: *Vendetta, Parramatta, Stuart, Yarra, Duchess, Derwent*. The following ships served in support of the allied forces in South Vietnam: *Perth, Sydney, Hobart, Vendetta, Jeparit*.

The ships *Melbourne, Supply, Moresby, Teal, Ibis, Curlew, Attack, Advance, Aitape, Anzac, Stalwart, Ovens, Onslow, Oxley, Diamantina* also made overseas visits.

### Fleet Air Arm

The Fleet Air Arm of the Royal Australian Navy maintains three front line squadrons for embarkation in the operational carrier H.M.A.S. *Melbourne*. These squadrons currently consist of Skyhawk A4-G fighter/ground attack aircraft, Tracker S2-E anti-submarine aircraft, and Wessex MK. 31B submarine helicopters. Four training and support squadrons are based at the Naval Air Station H.M.A.S. *Albatross* at Nowra, New South Wales. Other aircraft operated by the Navy are the Scout helicopter in *Moresby*, Iroquois helicopter (training and search and rescue), *Dakota*, Macchi trainer and Sea Venom (target towing).

### Ship construction and repairs

There are two naval dockyards, one at Garden Island, New South Wales, and one at Williamstown, Victoria. Also, the dockyard at Cockatoo Island, which is operated by the Cockatoo Docks and Engineering Company Pty Ltd by agreement with the Commonwealth, carries out considerable naval work. All three dockyards carry out ship refitting for the Navy.

The construction of the destroyer escort H.M.A.S. *Torrens* at Cockatoo Island is proceeding and the ship will enter service in 1971. Construction of H.M.A.S. *Flinders*, a small hydrographic ship, was commenced at Williamstown Dockyard in 1970. An extended refit of the Daring Class destroyers was commenced at Williamstown Dockyard with H.M.A.S. *Vampire* in 1970.

A contract for a further two Oberon class submarines is presently under negotiation with the United Kingdom Ministry of Defence (Navy). Approval has been given for the construction of a fast combat support ship and an oceanographic ship, both of which are to be built in Australia in the near future. A preliminary design for a new destroyer is currently in progress. This will serve to determine the major characteristics of the ship and will provide the basis for a detailed design.

### Personnel, training, entry, women's services, reserves

*Personnel.* The estimated strength of the Royal Australian Navy in relation to personnel borne for full-time duty for 1970-71 is 17,897. At 30 November 1970 the actual strength of personnel borne for full-time duty was 2,020 officers and 15,221 sailors, which includes 236 officers and sailors of the Citizen Naval Forces and 19 officers and sailors of the Royal Australian Navy Emergency Reserve.

*Training.* On entry, General List officers are trained at the Royal Australian Naval College, H.M.A.S. *Creswell* at Jervis Bay. The College was established to provide trained officers for the R.A.N. Junior entry to the College is at the age of fifteen to seventeen years and senior entry at a maximum age of twenty years. In November 1970 there were 86 cadet midshipmen under training. On completion of initial training officers go to the Fleet for sea training, followed by advanced training either ashore in Australia, at universities or technical colleges, or at Royal Navy training establishments in the United Kingdom.

H.M.A.S. *Cerberus* at Westernport, Victoria, is the main training establishment for adult sailors in the permanent naval forces, while several advanced training schools are established in New South Wales. The period of initial engagement for sailors varies from six years for tradesmen to nine or twelve years, and on completion sailors may re-engage for shorter periods up to the age of fifty.

H.M.A.S. *Nirimba* at Quakers Hill, New South Wales, is the naval school for apprentices. It provides secondary education, as well as technical training in trades, to boys aged fifteen to seventeen and a half years. The school was established in 1956 to meet the R.A.N.'s increased demand for highly skilled tradesmen. In November 1970 there were 565 naval artificer apprentices under training.



H.M.A.S. *Leeuwin* at Fremantle, Western Australia, is the junior recruit training establishment. Entrants must be aged between fifteen and a half and sixteen and a half years. Training lasts one year and instruction is mainly academic, the remaining time being devoted to basic naval and disciplinary training. On completion of the course sailors are posted for a period of sea training, after which they proceed to technical and specialist courses. In November 1970 there were 694 junior recruits undergoing training.

On completion of initial training sailors join the Fleet for sea training before returning to the various training schools at H.M.A.S. *Cerberus*, H.M.A.S. *Penguin* and H.M.A.S. *Watson* at Sydney and R.A.N. Air Station at Nowra, New South Wales. Sailors who are selected for the Submarine service receive initial submarine training in the United Kingdom and a number of technical courses for certain sailors are conducted in the United States of America.

*Direct entry Officers.* To meet increasing requirements for officers, direct entries are accepted into the Royal Australian Navy. Short service commissions of seven years are granted on completion of training as seamen, supply or aircrew officers to suitable applicants who have completed their secondary schooling and who are over seventeen years of age and under twenty-four years of age. Other direct entries may be approved outside these age limits from persons with appropriate qualifications and experience.

Opportunities exist for university undergraduates studying medicine, dentistry and engineering to enter the R.A.N., and on successful completion of their studies to commence short or full-time service in the Navy. Fully qualified doctors, dentists, engineers, instructors and legal officers may also enter the R.A.N. directly if they are of the appropriate age.

*Women's Services.* The present Women's Royal Australian Naval Service was inaugurated in January 1951. The numbers serving in shore establishments in November 1970 were 32 officers and 685 Wrens. The Royal Australian Naval Nursing Service was reconstituted in November 1964, and its strength in November 1970 was 22 officers.

*Emergency Reserve.* In November 1964 approval was given to form the Royal Australian Naval Emergency Reserve to provide a readily available source of trained manpower which may be called on for continuous full-time service. The authorised establishment of this force is 2,000 officers and sailors. At 30 November 1970 the strength of the reserve available for mobilisation was 73 officers and 851 sailors, which excludes 2 officers and 17 sailors serving full-time. Members are required to complete thirteen days' training annually and are paid an annual bounty.

*Citizen Naval Forces.* The Citizen Naval Forces consist of the R.A.N. Emergency List, Royal Australian Fleet Reserve, Royal Australian Naval Reserve, Royal Australian Naval Reserve (Sea-going), Royal Australian Naval Volunteer Reserve, and Women's Royal Australian Naval Service Reserve. The authorised establishment of the combined forces is 10,000. At 30 November 1970 there were 1,266 officers and 3,376 sailors in the Citizen Naval Forces. These figures exclude 112 officers and 124 sailors serving full-time. The R.A.N.R. is the training reserve of the Citizen Naval Forces. Members carry out weekly training and thirteen days' continuous training annually; sailors engage for periods of three years. Other reserves do not normally carry out part-time training, but members may volunteer for periods of annual training and for periods of full-time service with the R.A.N. A Women's Royal Australian Naval Service Reserve consisting of ex-permanent naval forces W.R.A.N.S. officers and W.R.A.N.S. was authorised in June 1968 and enlistments commenced in mid-November 1968.

## Military defence

A detailed historical account of the Australian defence forces prior to federation appears in Year Book No. 2, pages 1075-81. See also Year Book No. 12, page 999.

### Commonwealth systems

Under the terms of the Commonwealth of Australia Constitution Act the Commonwealth took over control of defence matters in March 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in a number of phases. For particulars of the phases which cover the period from the welding together of the military forces of the States into one homogenous Army in 1902 up to the re-establishment of the Military Board and the organisation of Commands after the 1939-45 War see Year Book No. 46 and earlier issues.

National Service Training was introduced in 1951 and suspended in 1959-60. In November 1964 the Government announced that National Service was to be re-introduced from June 1965. The scheme provides for a period of two years full-time duty in the Regular Army followed by three years

in the reserve. National Service registrants who are members of the Citizen Military Forces or who join prior to the ballot may elect to serve in the C.M.F. for a total of five or six years, depending on length of previous service, as an alternative to full-time continuous National Service Training. Special C.M.F. units have been formed to provide for those persons who wish to serve in the C.M.F., but who are unable to do so in normal units, because of remote location, etc.

### Organisation

Army Headquarters is responsible for the policy and control of the Australian Army. The Military Board consists of the Minister for the Army, President; the Chief of the General Staff; the Adjutant-General; the Quartermaster-General; the Master-General of the Ordnance; the Deputy Chief of the General Staff; the Citizen Military Forces Member; and the Secretary, Department of the Army. After the 1939-45 War, Command Headquarters were established to implement Army Headquarters policy and to command and administer those units placed under their authority. Command Headquarters are established in the capital cities of Australia and Papua-New Guinea. The geographic extent of Commands is as follows.

*Northern Command*—the State of Queensland.

*Eastern Command*—the State of New South Wales, less those parts included in Southern and Central Commands.

*Southern Command*—the State of Victoria and part of southern New South Wales.

*Central Command*—the State of South Australia, plus a portion of south-western New South Wales.

*Western Command*—the State of Western Australia.

*Tasmania Command*—the State of Tasmania.

*Northern Territory Command*—the Northern Territory.

*Papua-New Guinea Command*—the Territory of Papua and New Guinea.

The Army is divided into the Field Force, Forces in Papua-New Guinea, and the Australian Support Area, with both Regular and Citizen Military Forces elements in each. The basic formation of the Field Force is the division, which consists of nine infantry battalions with supporting arms and services units. Within the division three task force headquarters can command varying combinations of divisional units. The substantial parts of the combat elements of one Regular and two C.M.F. divisions have been raised, together with logistic support units. The Regular element of the Forces in Papua-New Guinea consists of two battalions of the Pacific Islands Regiment with a number of supporting units. An infantry battalion forms the major C.M.F. element. The Australian Support Area provides the training, administrative, and command structure on the mainland.

At 31 December 1970, units of the Australian Regular Army were deployed overseas as follows. In Vietnam a task force of two infantry battalions with supporting units, including aircraft support provided by the Royal Australian Air Force, was serving at the invitation of the Government of that country. In addition there was the major part of an infantry battalion group stationed in Singapore.

### Personnel, training, women's services, cadets

*Personnel.* The effective strength at 25 November 1970 was: Australian Regular Army, 46,487 (including 2,451 Pacific Islanders, 303 Citizen Military Forces on full-time duty, and 1,012 Women's Services); Citizen Military Forces, 30,511.

*Staff College.* Until 1938 the training of staff officers was carried out in the various Military Districts throughout Australia, except in cases where officers were selected from time to time to attend courses abroad. In 1938 an Australian Command and Staff School, located in the original Officers' Mess at Victoria Barracks, Sydney, was established. Between 1939 and 1945 the training of staff officers was carried out under varying conditions by different schools in accordance with the changing needs of the war.

Early in 1946 the Staff School (Australia) was established at Seymour, Victoria, and redesignated the Staff College in conformity with other Commonwealth training establishments for training officers for command and staff appointments. The College was later moved to Queenscliff, Victoria, where it is at present situated. The course is held annually and is of twelve months' duration. The normal intake is seventy students, and on successfully completing the course an officer is awarded the symbol 'psc'. The course is designed to train selected officers for appointments in all branches of the staff in peace and war and to prepare them to assume, after experience, command and higher staff appointments.

Included in the 1971 course will be students from Brunei, Canada, Ceylon, India, Indonesia, Malaysia, New Zealand, Pakistan, Thailand, United Kingdom and United States of America. Vacancies on each course are reserved also for officers who may be nominated by the Royal Australian Navy, the Royal Australian Air Force, and the Commonwealth Public Service.

In order to ensure common standards in tactical doctrine and staff and command training throughout the Commonwealth of Nations, liaison is maintained with other Staff Colleges, and to this end there is also a reciprocal exchange of instructors between the United Kingdom, the United States of America, and Australia. An instructor is also provided by New Zealand.

*Royal Military College.* The Royal Military College was established in 1911 at Duntroon in the Australian Capital Territory for the purpose of providing trained officers for the Army. The conditions of entry are laid down in the Royal Military College Regulations. The course is four years of military and academic studies. The first three years are primarily academic and the fourth year military. Following affiliation with the University of New South Wales a Faculty of Military Studies was introduced in 1968. Cadets who meet the requirements for admission to the Faculty may take a course, leading to the award of a degree in Military Studies by the University of New South Wales in one of the following: Arts, Applied Science or Engineering. Cadets not admitted to the Faculty take a diploma course appropriate to their educational background. On graduation, cadets are appointed lieutenants in the Australian Regular Army. The College also trains New Zealand cadets for commissions in the New Zealand Permanent Forces. In 1967 one Thai cadet commenced training at the College; another Thai cadet commenced in 1970.

*Officer Cadet School.* The Officer Cadet School was established in 1951 at Portsea, Victoria, for the purpose of speeding up the production of junior regimental officers for the Australian Regular Army. Serving members of the Australian Army, the Citizen Military Forces and civilians between the ages of eighteen and a half and twenty-two and a half are eligible to apply for entrance. A special entry provides for candidates up to twenty-four and a half years. The course lasts for forty-four weeks, and on graduation cadets are appointed second-lieutenants in the Australian Regular Army. Graduates normally proceed to further training at the Army School of the Arm and Service to which they have been allotted before being posted to regimental duties. The Officer Cadet School also trains officers on occasions for Kenya, Malaysia, New Zealand, Thailand, the Philippines, Brunei, the Pacific Islands Regiment and South Vietnam.

*Officer Training Unit.* An Officer Training Unit has been established at Scheyville, New South Wales, which is responsible for the training of National Service officers.

*Women's Royal Australian Army Corps School.* The W.R.A.A.C. School, established in 1952 at Mildura, Victoria, moved to Mosman, New South Wales, in 1958. It has three wings, one whose primary task is the training of officer cadets for the W.R.A.A.C., one for the training of non-commissioned officers at all levels and for other special courses, and one which is a basic training wing. The officer cadets are selected from eligible applicants, who may be serving members between nineteen and a half and thirty-two years of age, or civilians between nineteen and a half and thirty years of age. The course is of twenty-seven weeks' duration and on graduation cadets are appointed lieutenants in the Royal Australian Army Nursing Corps or the Women's Royal Australian Army Corps.

*Army Apprentices' School.* The Army Apprentices' School was opened in 1948 at Balcombe, Victoria, with the aim of training youths as skilled tradesmen for the Australian Regular Army and to form a background for an Army career with prospects of promotion for the graduates. The course is open to youths between the ages of fifteen and seventeen years and provides training in a number of highly skilled trades. Most apprentices attend two years of intensive theoretical and practical work at the Apprentices' School which is followed by two years on-the-job training in an appropriate Army workshop or technical unit under the supervision of an Apprentice Master. The exceptions to this are the Radio Tradesmen who train for three years at the Apprentices' School before one year on-the-job training. Before leaving the Apprentices' School all apprentices take the Victorian Apprenticeship Commission's final grade public examination, which ensures that they will be accepted as qualified tradesmen in civilian life when they eventually leave the Army. In addition to trade and military training, the Apprentices' School provides the facility for apprentices to attain an educational standard of Victorian Technical Leaving.

*Other schools.* Army schools have been established for the major Arms and Services for the purpose of training officers and other ranks in the up-to-date techniques of their own Arm or Service, to qualify them for promotion requirements, and to produce trained instructors. Courses at Army schools are conducted for members of both the Australian Army and the Citizen Military Forces.

The following Army schools have been established: Jungle Training Centre, Armoured Centre, School of Artillery, School of Military Engineering, Transportation Centre, School of Military



Survey, School of Signals, Infantry Centre, Army Aviation Centre, Army Intelligence Centre, Royal Australian Army Service Corps Centre, Royal Australian Army Medical Corps School of Army Health, Royal Australian Army Ordnance Corps Centre, Royal Australian Electrical and Mechanical Engineers' Training Centre, Royal Australian Army Provost School, School of Music, Air Support Unit (Army Component), and Air Movement Training and Development Unit (Army Component).

*Women's Services.* In July 1950 approval was given for the enlistment of women into the Australian Regular Army on a limited scale. Enlistment commenced into the Royal Australian Army Nursing Service in November 1950 and into the Australian Women's Army Corps early in 1951. In February 1951 the Royal Australian Army Nursing Service became a Corps and was designated the Royal Australian Army Nursing Corps (R.A.A.N.C.). During June 1951 the Australian Women's Army Corps was redesignated the Women's Royal Australian Army Corps (W.R.A.A.C.). The Women's Services in the Australian Regular Army now comprise two Corps only, the Royal Australian Army Nursing Corps and the Women's Royal Australian Army Corps.

Women's Services are incorporated in the Citizen Military Forces, and one company of the Women's Royal Australian Army Corps is located in each Command excluding Northern Territory Command and Papua-New Guinea Command. Companies of the Royal Australian Nursing Corps are located in each Command excluding Northern Territory Command and Papua-New Guinea Command.

*Australian Cadet Corps.* The Australian Cadet Corps is a voluntary organisation. It serves as a training ground to provide, to some extent, the future officers and non-commissioned officers of the Australian Military Forces, and, as such, occupies a foremost position in the scheme of national defence. The Australian Cadet Corps, does not, however, form part of the Australian Military Forces. School Cadet units are raised at educational establishments throughout the Commonwealth and Papua and New Guinea, except in the Northern Territory. The minimum age for enrolment is the year in which the applicant reaches the age of fourteen years, and cadets, who, in the large majority of schools receive a free issue of A.M.F. pattern uniform, may remain in the Cadet Corps until they cease to be pupils of the educational establishments concerned. A few units retain their own pattern school uniform and are not issued with A.M.F. pattern uniforms. Provision is made for the appointment of officers of cadets, cadet under-officers, warrant and non-commissioned officers on an authorised establishment scale from within school units. School Cadet units may be, and in many cases are, affiliated with Citizen Military Force units. The establishment of the Corps is 46,000 all ranks, and at 15 October 1970 comprised 347 School Cadet units with a posted strength of 39,910, all ranks.

## Air defence

A statement regarding the preliminary steps taken in connection with the development of air defence appears in Year Book No. 18, page 610, and one on the expansion and development and type of operations of the Royal Australian Air Force during the 1939-45 War in Year Book No. 36, page 1027. Details of the current defence policy as it affects the R.A.A.F. were outlined by the Minister for Defence in his speech in the House of Representatives on 10 March 1970.

### Higher organisation

The Air Board is responsible to the Minister for Air for the control, organisation, and administration of the Royal Australian Air Force and is constituted as follows: Chief of the Air Staff, Air Member for Personnel, Air Member for Supply and Equipment, Air Member for Technical Services, and the Secretary, Department of Air.

The Air Board administers and controls R.A.A.F. units in Australia and its Territories through two commands, Operational Command and Support Command. The guiding principles of the command organisation within Australia are to decentralise day-to-day operating activities as far as possible and to streamline the force and make it as efficient as possible. The operational units overseas, working within the broad directives issued by the Air Board, comprise the R.A.A.F. component of the British Commonwealth Strategic Reserve located at Butterworth in Malaysia, and the R.A.A.F. component of the Australian forces in South Vietnam.

The members of the Air Board and their staffs are located at the Department of Air in Canberra. An R.A.A.F. representative is located in London, and air attachés are located in Djakarta, Saigon, Paris, and Washington. *Operational Command* is responsible for the command of operational units and the conduct of their operations within Australia and its territories. *Support Command* is responsible for the recruitment and training of personnel, and the supply and maintenance of service equipment.

### Organisation of units

*Bases.* Each command is established with the units necessary to carry out its allotted function. There is no fixed rule in relation to the number and types of units within each command, as this depends upon the nature of its present and future responsibilities. Where possible, units having similar functions or requiring similar facilities are located together, and the geographical locations are known as bases.

*Formations*—comprising a headquarters unit to control the activities of a number of units at one location; each formation has a base squadron which provides common services to all units at the location.

*Flying squadrons*—strike reconnaissance, air defence, ground attack, medium and short range transport, helicopter, and maritime reconnaissance squadrons which undertake the operational flying and in conjunction with operational conversion units, the operational flying training commitments of the R.A.A.F.

*Operational conversion units*—specialising in operational conversion training of aircrew for the strike reconnaissance, air defence, and ground attack squadrons.

*Aircraft depots*—specialising in major overhaul, etc., of aircraft and equipment.

*Stores depots*—centrally located depots to which stores and equipment ordered by the R.A.A.F. are delivered for distribution to units.

*Airfield construction squadron*—specialising in airfield construction tasks in support of the R.A.A.F. operational component within Australia and the Territories.

*Telecommunications units*—responsible for the communications services of the R.A.A.F.

*R.A.A.F. Hospitals*—hospitals in Australia and at Butterworth providing medical services for the R.A.A.F.

*Flying and ground schools and units*—schools and units specialising in the aircrew and ground staff training required by the R.A.A.F.

*R.A.A.F. Diploma Squadron and R.A.A.F. Academy*—training units, to diploma and university degree level respectively for officer cadet entrants to the R.A.A.F.

*R.A.A.F. Staff College*—trains specially selected R.A.A.F. officers for higher staff and command posts.

### Aircraft

The R.A.A.F.'s strike reconnaissance force is equipped with Canberra and Phantom F4-E aircraft, and the air defence and ground attack squadrons are equipped with the Mirage 111-O. Transport aircraft currently in use are Hercules C130A and E, Caribou, Dakota, Mystere 20, HS748, and BAC111. The two helicopter squadrons operate the Iroquois and the two maritime squadrons operate Neptune SP2H and Orion P3-B aircraft. Aircraft used for training are the Winjeel, Macchi, HS748, Sabre, and Mirage 111-O.

### Personnel, reserve, women's services

At 30 November 1970, the authorised Permanent Air Force establishment was 24,958 and the Citizen Air Force, 1,080; the enlisted strength was Permanent Air Force 22,322 and Citizen Air Force 806, while the strength of the General Reserve was 6,403. The Permanent Air Force figures include the Women's Royal Australian Air Force, which has an establishment of 1,022 and strength of 857, and the R.A.A.F. Nursing Service with an establishment of 115 and strength of 94.

## Department of Supply

For information relating to the creation of the Department of Supply and its development up to 1959 see Year Book No. 51, page 1204, and earlier issues. On 18 December 1959 the Department assumed responsibility for the operation and management of space tracking stations in Australia on behalf of the United States National Aeronautics and Space Administration. On 29 March 1962 Australia became a foundation member of the European Launcher Development Organisation, and the Department accepted responsibility for the test firing of the launching rocket for that Organisation's experimental satellite, using the facilities of the Woomera Rocket Range. The last of these ten firings at Woomera was on 12 June 1970.

On 1 May 1968 the Department took over the administration of the Antarctic Division from the Department of External Affairs.

### Functions of Department

The functions of the Department of Supply include the following.

Defence research and development, including the operation of the Joint United Kingdom-Australia Weapons Research Project, and Australian research and development.

Operation and management of establishments producing aircraft, guided missiles, small arms, ammunition, explosives, marine engines, clothing, and other defence goods.

Arranging of contracts for purchasing in Australia of supplies and services required by the Armed Forces and certain other Government organisations.

Operation and management of space tracking stations in Australia on behalf of the United States National Aeronautics and Space Administration.

Acquisition, maintenance, and disposal of strategic materials.

Planning and establishment of manufacturing facilities for the production of munitions and other defence goods.

Investigation and development of Australian sources of supply in connection with defence.

Disposal of surplus or obsolescent Commonwealth goods on behalf of all departments.

Provision of Commonwealth transport facilities outside the Australian Capital Territory and the Northern Territory.

Provision and control of stores required for or in connection with matters administered by the Department of Supply, and general storage for other Departments as required.

Arrangements for ascertaining costs and the control and limitation of profits in connection with the production of munitions and other defence goods.

Organise expeditions and establish and maintain stations in the Antarctic for the purposes of exploration and conducting scientific studies.

The Minister for Supply administers the *Supply and Development Act* 1939-1966, except in so far as it contains the building (*see also* the chapter Transport and Communication), repair, and maintenance of merchant ships and the building, extension, alteration, repair, and maintenance of shipyards, drydocking, and repair facilities for merchant ships.

The Minister for Supply also administers the *Antarctic Treaty Act* 1960, the *Australian Antarctic Territory Acceptance Act* 1933, the *Australian Antarctic Territory Act* 1954-1963, *Heard Island and McDonald Islands Act* 1953-1963.

### Research and Development

The Research and Development Division is responsible for research and scientific development in relation to war *matériel*, including the operation of the Joint United Kingdom-Australia Weapons Research Project and support of space research programmes for NASA. The headquarters of the Division is situated in Canberra, and the following establishments are included in the Division: (a) Weapons Research Establishment, Salisbury, South Australia; (b) Defence Standards Laboratories, Maribyrnong, Victoria; Woodville North, South Australia; and Alexandria, New South Wales; (c) Aeronautical Research Laboratories, Fishermen's Bend, Victoria; and (d) Central Studies Establishment, Canberra, Australian Capital Territory.

### Weapons Research Establishment

The establishment has four main sections, namely the Trials Wing, the Applied Physics Wing, the Weapons Research and Development Wing, and the Engineering Wing. The Trials Wing is concerned with the operation, development, and instrumentation of the Woomera Range, and the planning, execution, and assessment of trials. The Applied Physics Wing conducts research and development on behalf of the Australian Services and in support of the United Kingdom-Australia Joint Project.

The Weapons Research and Development Wing is concerned primarily with Australian initiated defence research and development. The Engineering Wing provides engineering design and development and support facilities for other Weapons Research Establishment wings and research establishments and undertakes tasks for the Australian Services.

### United States space projects

Agreements have been signed by the Australian and United States Governments for a co-operative programme for the establishment and operation in Australia for space vehicle tracking stations. The agencies for the Australian and American Governments are the Department of Supply and the National Aeronautics and Space Administration (NASA) respectively.



As part of the world-wide network supporting NASA's space programme the stations are designed to track spacecraft in their orbits around the earth or on their journey into space, to receive telemetered data from the vehicle, and to issue radio commands controlling the vehicle's manoeuvres. The Department of Supply is responsible for managing, staffing and operating the stations on behalf of NASA. The stations which are now in operation are at:

Island Lagoon near Woomera (deep space probes and optical tracking of scientific satellites);  
 Carnarvon in Western Australia (manned space flights and scientific satellites);  
 Tidbinbilla in the A.C.T. (deep space probes and manned space flights);  
 Orroral Valley in the A.C.T. (scientific satellites);  
 Honeysuckle Creek in the A.C.T. (manned space flights, particularly the 'man on the moon' Apollo project);

Work has commenced on the construction of a 210 ft tracking antenna at Tidbinbilla, A.C.T.

An extensive communications system links the tracking stations with the control centres in the United States. At all five stations the responsibility is vested in a station director who is a senior officer of the Department of Supply. Tidbinbilla, Honeysuckle Creek and Carnarvon, play an important part in the communications network during the Apollo moon-landing missions.

Under the Australian Government's policy of using the resources of private industry wherever possible, contracts for operation and maintenance services at the stations have been let as follows: Amalgamated Wireless (A'asia) Ltd, (Carnarvon and Orroral Valley, Tidbinbilla and Island Lagoon), and Standard Telephones and Cables Pty Ltd (Honeysuckle Creek).

NASA space projects requiring Australian participation are as follows.

*Manned space flights.* Project Apollo—landing of men on moon and their return to earth.

*Scientific and applications satellites.* Large multiple experiment scientific satellites (Orbiting Geophysical Observatories; Orbiting Astronomical Observatories, etc.). Operations satellites for meteorology (Tiros).

*Deep space probes.* Mariner—probes to Mars, Venus, etc. Pioneer—interplanetary investigations.

#### **Defence Standards Laboratories**

This establishment provides a scientific service to the Defence Services, Department of Supply factories and other authorities generally within the field of chemistry, physics, metallurgy and engineering and to a limited extent, in the fields of biochemistry and physiology. It also undertakes background research appropriate to its responsibilities and of significance to the defence requirements of Australia.

#### **Aeronautical Research Laboratories**

In the aeronautical field this establishment undertakes research and development work on specific defence projects, acts as consultant and conducts investigations for the Services, Government Departments or industries engaged on defence work. Background research related to the execution of its responsibilities and of significance to the defence requirements of Australia is also undertaken.

#### **Central Studies Establishment**

This establishment began its activities in Canberra during 1969. Its role is to complement operational analysis studies being undertaken in other Supply establishments for the Defence and Service Departments.

#### **Production of munitions**

The Department is responsible for the production of a wide range of munitions required by the Armed Services. Production is carried out substantially in Government factories, although some orders, mainly for components, are placed with private industry.

The following Government factories are currently in operation: Ammunition—Footscray, Victoria; Explosives and Filling—Albion and Maribyrnong, Victoria; Mulwala and St Marys, New South Wales; Ordnance—Maribyrnong, Bendigo, and Port Melbourne, Victoria; Small Arms—Lithgow, New South Wales; Clothing—Coburg and South Melbourne, Victoria.

The Ammunition Factory produces the complete round of small arms ammunition and also components for larger calibre gun ammunition, including empty cartridge cases, electronic and mechanical fuses, and primers. The Explosives Factories produce the various types of explosive compositions and propellants required for gun ammunition, rockets, and guided missiles. The Filling Factory at St Marys fills and assembles into bombs and complete rounds of ammunition (other than small arms ammunition) the empty components and materials supplied by the other munitions factories and by private industry.

The Ordnance Factories at Maribyrnong and Bendigo are equipped to produce heavy ordnance equipment, such as naval guns and gun mountings; large turbine gears; steel shell and bomb bodies; empty rocket motors for guided missiles; trailers and tank transporters; and other items requiring heavy engineering capacity. As well as work for the Services, the Bendigo Factory produces components for marine diesel engines for Australian shipping and large heavy engineering items for the coal, cement, and steel industries.

The Port Melbourne Factory builds and services large marine diesel engines for the Australian shipbuilding industry. Major forgings and fabrications for these engines are produced at the Ordnance Factories at Maribyrnong and Bendigo. The Small Arms Factory is equipped to produce the rifles and other small arms required by the Services. Current production is the 7.62-mm automatic rifle, for which orders have also been received from overseas, and the 9-mm carbine which serves as the infantry light machine gun. The Clothing Factories make uniforms and clothing for the three Services, the Postmaster-General's Department and some other Commonwealth authorities.

#### **Production of aircraft and guided weapons**

Production both in Government factories and in industry of military types of aircraft and aero-engines and of other aircraft components required by the Royal Australian Air Force is administered by the Department of Supply. Planning of capacity and the negotiation of contractual arrangements concerning aircraft modification, repair and overhaul, and for the supply of spare parts and airborne equipment for the R.A.A.F., the R.A.N., and the Army are also functions of the Department.

The following factories are operated by the Department: The Government Aircraft Factory at Fishermen's Bend and the Final Assembly Workshops and Test Airfield at Avalon, Victoria, and the Machine Shop at Northfield, South Australia. During 1968 the French Mirage supersonic fighter aircraft production programme for the R.A.A.F. was completed. The current aircraft production programme comprises the Jindivik radio-controlled target aircraft, which has been or is being supplied to Britain, Sweden, and the United States, as well as to the Weapons Research Establishment and the Royal Australian Navy. Apart from the Government Aircraft Factory, the Commonwealth Aircraft Corporation Pty Ltd is the only major aircraft manufacturer in Victoria. The Corporation is the prime contractor for the Australian production for the R.A.A.F. of the Italian Macchi jet trainer and for the production of the British Viper engine that powers this aircraft. Hawker de Havilland Australia Pty Ltd, at Bankstown and Lidcombe, New South Wales, is the major sub-contractor for the Macchi.

Other major activities carried out in the Government factories or by various private contractors are the manufacture of airframe and engine spare parts; the overhaul, repair, and modification of military aircraft and engines currently in service with the R.A.A.F., R.A.N., and Army; and the reconditioning and servicing of aircraft instruments and other ancillary equipment.

The production of the Ikara anti-submarine missile is continuing at the Government Aircraft Factory at Fishermen's Bend. Production of the complete Ikara system, covering broadly the missile, motor, propellants, guidance equipment, launcher, and magazine handling equipment, is a combined effort by departmental establishments and industry, directed and co-ordinated by the Department.

At St Marys, New South Wales, a Guided Weapons and Electronics Support Facility has been established to repair and maintain the Tartar surface-to-air missile supplied by the United States for Australia's new missile destroyers. Later, the facility will be expanded to cater for other service missiles.

#### **Electronics supply**

The Department is responsible for the technical aspects of production and procurement from Australian industry of telecommunications and electronic equipment for the Australian Services, for Commonwealth authorities such as Directorate of Civil Defence and for foreign aid programmes administered by the Department of Foreign Affairs.

Some of the more important projects handled for the Services have included a ground-to-air high-frequency communications system for Air, high-frequency transmitters for Army, high-frequency transmitters and antennae for long-range Navy shore to ship communications, portable shelters for communications equipment for Air and medium-speed data transmission equipment for Army, Navy and Air.

A large contract is in existence for the domestic development of micro-electronic devices. Other contracts have also been arranged to establish the reliability of Australian-made electronic equipment and components.

### Contract Board

The Contract Board, constituted under the *Supply and Development Act 1939-1966*, arranges for the performances of services and the purchase of supplies for the Naval, Military and Air Forces of the Commonwealth and for the Department of Supply. Upon request, the Board also arranges contracts on behalf of other Commonwealth departments and authorities. It also arranges disposal—by means of public tender, auction or otherwise—of all surplus or unserviceable Commonwealth-owned goods.

The Board comprises representatives of three Service Departments and of the Department of Supply. In each State there is a District Contract Board similarly constituted, which is authorised to exercise the functions of the Contract Board within specified financial limitations. The Contract Board has no attached contracting staff of its own, and while all contracts are arranged in the Board's name, its role is to decide the award of contracts in those cases where the value exceeds the delegated authority of District Contract Boards.

The Board's policies and procedures are administered by the Contracts Branch of the Department of Supply in Canberra.

### CONTRACT BOARD ORGANISATION: PURCHASES AND REALISATIONS FROM DISPOSALS, 1968-69 AND 1969-70 (\$'000)

<i>District Contract Board</i>	<i>Purchases</i>		<i>Realisations from disposals</i>	
	<i>1968-69</i>	<i>1969-70</i>	<i>1968-69</i>	<i>1969-70</i>
New South Wales . . . .	48,393	44,939	2,956	3,595
Victoria . . . . .	143,218	125,788	2,517	3,726
Queensland . . . . .	7,024	7,078	1,007	1,048
South Australia . . . .	6,916	9,406	1,395	1,472
Western Australia . . .	1,804	1,327	443	521
Tasmania . . . . .	216	287	192	148
<b>Total . . . . .</b>	<b>207,571</b>	<b>188,825</b>	<b>8,510</b>	<b>10,510</b>

### Defence supply planning

The central planning authority of the Department is the Production Planning Branch, whose principal functions are:

- to study manufacturing capacity available for the Services' requirements in peace and war;
- to plan for and assist in the development of additional production capacity;
- to provide and administer reserve stock of materials and reserve pools of plant, equipment and other requirements needed for rapid expansion in the event of war;
- to prepare submissions on defence production preparedness to the higher defence machinery;
- to plan the organisation of industrial resources for defence production in war;
- to receive and allocate to appropriate departmental divisions all orders and procurement demands placed on the Department;
- to inform Service and other customers on all matters of price, delivery, and expenditure phasing of requirements allocated for satisfaction by the production divisions;
- to monitor achievement against departmental master delivery programmes;
- to provide advisory services in the field of materials supply and utilisation of Government factories and contractors engaged in the production of munitions requirements;
- to administer the national stockpile of strategic materials, equipment, tooling and components;
- to administer overseas aid programmes allocated to the Department;
- to develop commercial outlets for departmental products, and plans for the full use of production capacity, exploitation of inventions and protection of patents;
- to undertake commercial sales;
- to administer the Board of Management for Production; and
- to provide administrative services to the Industry Advisory Committees.



A series of Industry Advisory Committees has been established to advise the Minister and the Department of the ability of industry to meet the Services' *matériel* requirements for mobilisation in war. The Committees are: Aircraft and Guided Weapons; Chemical; Electronics and Telecommunications; Leather and Footwear; Machine Tools and Gauges; Mechanical Engineering; Rubber; and Textiles and Clothing. Members of the Committees include industrialists of wide experience and the highest ability in their chosen fields.

#### **Stores and Transport Branch**

This Branch functions as the central storage and transport authority for most Commonwealth Departments. It is the authority for the arrangement of furniture removals at departmental expense in all States, but not in the Northern Territory. It has agents in Darwin. It also operates a shipping and customs section and the England-Australia bulk air freight scheme for Commonwealth Departments.

On 30 June 1970 the Branch had under its control land, buildings, and works, vehicles, plant, and equipment valued at \$28,387,896; 4,698 motor vehicles and 3,240,000 sq ft of storage space as well as storage facilities for large quantities of chemicals, bulk liquids, and explosives.

#### **Finance Branch**

The total expenditure on Department of Supply activities in 1969-70 was \$200,410,000, comprising \$96,005,000 from Parliamentary appropriations and \$104,405,000 from Trust Fund accounts. The latter included expenditure of \$18,218,000 for storage and transport, \$66,785,000 in Government Munitions and Aircraft Factories, and Industry, and \$18,423,000 on projects for other Governments and international bodies. Cafeteria expenditure totalled \$978,402.

In addition, transactions under the United States-Australian logistics arrangement in 1969-70 amounted to \$529,000, comprising \$68,000 relating to Parliamentary appropriations and \$461,000 relating to Trust Fund accounts.

## CHAPTER 5

### REPATRIATION

The Repatriation Commission, established under the *Repatriation Act* 1920–1970, consists of three full-time members. It is responsible for the administration of the Repatriation Act and associated legislation, all matters of policy, and the general administration and overall supervision of the Repatriation Department. The Chairman of the Commission is also the Permanent Head of the Repatriation Department, which provides the administrative machinery through which the Commission operates. The central office is in Canberra and there is a branch office, under the control of a Deputy Commissioner, in each State.

The principal functions of the Department are: the payment of war and service pensions to eligible ex-servicemen and ex-servicewomen and their dependants; the provision of medical treatment for ex-servicemen and ex-servicewomen for injuries and illnesses caused or aggravated by their war service; the provision of medical treatment in certain circumstances for ex-servicemen and ex-servicewomen who are suffering from injuries and illnesses not caused or aggravated by war service; the provision of medical treatment for widows and dependants of deceased ex-servicemen whose deaths are due to war service; and a wide range of other benefits for eligible persons.

Benefits are provided in respect of service, not only in the 1914–18 and 1939–45 Wars, but also in the South African War 1899–1902, the Korea and Malaya operations and with the British Commonwealth Far East Strategic Reserve and the Special Overseas Forces serving in prescribed areas.

For information on war service land settlement *see* Chapter 23, Rural Industry; for statistics relating to war service homes *see* Chapter 9, Housing and Building.

For detailed information about repatriation pensions, benefits and services, reference should be made to the annual reports of the Repatriation Commission.

### War pensions

The first provision for the payment of war pensions to ex-servicemen and their dependants was made by the Commonwealth Parliament in the *War Pensions Act* 1914. This Act was repealed in 1920 by the *Australian Soldiers' Repatriation Act* 1920 (amended from 31 December 1950 to the Repatriation Act). Amendments to the Act in 1943 considerably widened the eligibility provisions, to the benefit mainly of members of the Citizen Military Forces who had not served outside Australia.

For a brief description of eligibility for war pensions; the conditions for payment of the various rates and allowances; and of operation of the Appeals Tribunals, *see* pages 91–93 of Year Book 55, Chapter 5, Repatriation.

#### Pensions and allowances

War pensions and associated allowances are not subject to a means test, except in the case of dependants other than wives, widows, widowed mothers and children. Pensions and allowances payable and the main weekly rates from 1 April 1971 are as follows.

*Pensions for war-caused incapacity—Special rate* (totally and permanently incapacitated or blinded), \$39.00; an equivalent rate is payable for temporary total incapacity or to an ex-serviceman pensioned for pulmonary tuberculosis who is, as a result, unfit for employment; *Intermediate Rate*. (Capable of part-time work only), \$28.50; ex-servicemen pensioned for pulmonary tuberculosis and able only to work part-time receive the same rate; *General Rate* (capable of full-time employment), 100 per cent basic rate, \$12. *Dependants*—Pensions are also payable to the dependants of incapacitated ex-servicemen: Wife, \$4.05; children under 16 years, \$1.38; (Maximum rates).

*Pensions in respect of death—War Widows* (where death was due to war service or, at the date of death, the ex-serviceman was receiving a war pension at the special rate, or its equivalent in respect of pulmonary tuberculosis, or as a double amputee) \$16.00; eligible war widows may also receive a domestic allowance, \$8.00; *children* (under 16 years of age), 1st child, \$6.00; 2nd and subsequent children, \$5.00 each; double orphans (both parents deceased), \$12.00.

*Allowances*—various allowances are provided to supplement war pensions and these vary according to the type and severity of disablement and the special needs of the pensioner. The main allowances and maximum weekly rates payable are: *Special compensation allowance* (payable to certain general rate pensioners assessed as being 75 per cent to 100 per cent incapacitated), from \$4.50 to \$6.00; *Attendants allowance* (for the severely disabled), maximum \$14; *Clothing allowances* (where clothing is subject to damage from surgical aids, etc.), from 43 cents to 85 cents; *Domestic allowance* (payable to eligible war widows), \$8.00. Other allowances payable include: *Sustenance allowance*; *Fares, subsistence and attendance allowance*; *Recreation transport allowance*; *Funeral benefits, etc.*

### Summary of war pensions

The following tables provide a summary of war pensions (excluding miscellaneous war pensions) for the 1914–18 War, the 1939–45 War (including war pensions payable under the *Interim Forces Benefits Act* 1947–1966 and the *Native Members of the Forces Act* 1957–1968), the Korea and Malaya operations, the Far East Strategic Reserve, and the Special Overseas Service. Statistics relating to miscellaneous war pensions are shown later in this section.

#### WAR PENSIONS: SUMMARY, AUSTRALIA, 1969-70

		1914-18 War	1939-45 War(a)	Korea and Malaya operations	Far East Strategic Reserve	Special Overseas Service	Total
New claims granted	No.	640	12,674	612	190	3,013	17,129
Restorations	No.	27	276	11	2	1	317
Claims disallowed(b)	No.	573	3,816	144	50	750	5,333
Pensions cancelled (gross)	No.	177	20,595	346	33	71	21,222
Deaths of pensioners	No.	5,645	6,086	40	3	11	11,785
Number of pensions in force at 30 June 1970		83,388	480,876	11,809	1,814	6,789	584,676
Annual pension liability at 30 June 1970	\$'000	53,969	122,265	1,485	192	819	178,730
Amount paid in pensions during the year 1969-70	\$'000	n.a.	n.a.	n.a.	n.a.	n.a.	183,086

(a) Includes interim forces and native members of the forces.  
for all their disabilities disallowed.

(b) Number of ex-servicemen who had their claims

#### WAR PENSIONS: SUMMARY, AUSTRALIA, 1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
New claims granted	22,750	21,121	19,967	17,570	17,129
Restorations	571	526	343	429	317
<i>Total additions</i>	23,321	21,647	20,310	17,999	17,446
Pensions cancelled (gross)	26,450	25,732	24,539	22,285	21,222
Deaths of pensioners	10,308	10,898	10,950	11,247	11,785
<i>Total reductions</i>	36,758	36,630	35,489	33,532	33,007



**Classes of war pensions**

The following tables provide an analysis of the total number of new claims granted, pensions in force, and class of pension for 1969-70.

**WAR PENSIONS: NEW CLAIMS GRANTED, AUSTRALIA, 1969-70**

<i>Class</i>	<i>1914-18 War</i>	<i>1939-45 War(a)</i>	<i>Korea and Malaya operations</i>	<i>Far East Strategic Reserve</i>	<i>Special Overseas Service</i>	<i>Total</i>
Ex-servicemen . . . . .	288	4,091	120	39	1,212	5,750
Wives and widows of ex-servicemen . . . . .	332	4,418	130	41	782	5,703
Children . . . . .	16	3,980	354	109	1,000	5,459
Other dependants . . . . .	4	185	8	1	19	217
<b>Total . . . . .</b>	<b>640</b>	<b>12,674</b>	<b>612</b>	<b>190</b>	<b>3,013</b>	<b>17,129</b>

(a) Includes interim forces and native members of the forces.

**WAR PENSIONS IN FORCE: AUSTRALIA, 30 JUNE 1970**

<i>Class</i>	<i>1914-18 War</i>	<i>1939-45 War(a)</i>	<i>Korea and Malaya operations</i>	<i>Far East Strategic Reserve</i>	<i>Special Overseas Service</i>	<i>Total</i>
Ex-servicemen . . . . .	27,881	185,369	3,219	505	2,867	219,841
Wives . . . . .	30,946	160,639	2,547	398	1,615	196,145
Children . . . . .	301	99,678	5,635	831	1,993	108,438
War widows . . . . .	23,702	24,761	145	23	94	48,725
Children of deceased ex-servicemen . . . . .	40	4,520	145	48	169	4,922
Orphans . . . . .	16	162	3	..	1	182
Parents . . . . .	302	5,234	109	8	50	5,703
Others . . . . .	200	513	6	1	..	720
<b>Total . . . . .</b>	<b>83,388</b>	<b>480,876</b>	<b>11,809</b>	<b>1,814</b>	<b>6,789</b>	<b>584,676</b>

(a) Includes interim forces and native members of the forces.

**WAR PENSIONS FOR INCAPACITATED EX-SERVICEMEN IN FORCE BY CLASS OF PENSION AUSTRALIA, 30 JUNE 1970**

<i>Class</i>	<i>1914-18 War</i>	<i>1939-45 War(a)</i>	<i>Korea and Malaya operations</i>	<i>Far East Strategic Reserve</i>	<i>Special Overseas Service</i>	<i>Total</i>
Special rate (T.P.I.) or equivalent . . . . .	8,494	14,286	97	10	22	22,909
Intermediate rate . . . . .	181	1,331	17	2	2	1,533
General rate—from 10 per cent to 100 per cent assessed disability . . . . .	19,206	169,752	3,105	493	2,843	195,399
<b>Total . . . . .</b>	<b>27,881</b>	<b>185,369</b>	<b>3,219</b>	<b>505</b>	<b>2,867</b>	<b>219,841</b>

(a) Includes interim forces and native members of the forces.

**Number of war pensions and annual liability, States, etc.**

The following table shows the number of pensions in force and annual liability at 30 June 1970, according to place of payment.

**WAR PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY  
STATES, ETC., 30 JUNE 1970**

Place of payment	Number of war pensions in force at 30 June 1970(a)				Annual pension liability at 30 June(b) (\$'000)
	Incapacitated ex-servicemen	Dependants of incapacitated ex-servicemen	Dependants of deceased ex-servicemen	Total	
New South Wales(c)	78,336	105,714	21,897	205,947	63,968
Victoria	59,392	82,671	17,051	159,114	49,851
Queensland	33,597	48,627	8,027	90,251	28,246
South Australia(d)	20,349	28,586	5,199	54,134	14,914
Western Australia	18,449	25,257	4,254	47,960	12,631
Tasmania	8,635	13,040	2,123	23,798	7,590
Overseas	1,083	1,508	881	3,472	1,530
<b>Total</b>	<b>219,841</b>	<b>305,403</b>	<b>59,432</b>	<b>584,676</b>	<b>178,730</b>

(a) Includes interim forces and native members of the forces 1939-45 War. (b) Includes domestic allowance payable to widows. (c) Includes Australian Capital Territory. (d) Includes Northern Territory.

**Summary of war pensions, 1965-66 to 1969-70**

The following table shows the number of pensions granted, claims rejected, pensions in force and the annual liability for pensions in each of the years ended 30 June 1966 to 1970.

**WAR PENSIONS: SUMMARY, AUSTRALIA, 1965-66 TO 1969-70**

Year	Number of war pensions in force at 30 June(a)—						Annual pension liability at 30 June(c) (\$'000)
	Pensions granted	Claims disallowed (b)	Incapacitated ex-servicemen	Dependants of incapacitated ex-servicemen	Dependants of deceased ex-servicemen	Total	
1965-66	22,750	5,071	223,377	365,583	57,195	646,155	156,904
1966-67	21,121	4,819	222,912	350,365	57,897	631,174	163,388
1967-68	19,967	4,578	222,479	334,823	58,674	615,976	164,848
1968-69	17,570	4,950	221,343	319,899	59,071	600,313	171,818
1969-70	17,129	5,333	219,841	305,403	59,432	584,676	178,730

(a) Includes interim forces and native members of the forces 1939-45 War. (b) The number of claimants who had the claims for all their disabilities disallowed. (c) Includes domestic allowance payable to widows.

The following table shows, for the years 1965-66 to 1969-70, the amounts paid in pensions and the places where they were paid.

**WAR PENSIONS: AMOUNT PAID(a), STATES, ETC., 1965-66 TO 1969-70  
(\$'000)**

Place of payment	1965-66(b)	1966-67	1967-68	1968-69(b)	1969-70
New South Wales(c)	58,851	55,884	57,424	64,981	65,469
Victoria	49,526	46,882	47,146	51,566	51,214
Queensland	25,928	24,992	25,525	28,543	29,055
South Australia(d)	14,633	13,613	13,807	15,326	15,151
Western Australia	12,617	11,869	11,914	13,038	12,786
Tasmania	6,914	6,650	6,786	7,617	7,831
Overseas	1,677	1,509	1,519	1,414	1,580
<b>Total</b>	<b>170,146</b>	<b>161,399</b>	<b>164,121</b>	<b>182,485</b>	<b>183,086</b>

(a) Includes domestic allowances paid to widows. (b) Includes five 12-weekly payments Australian Capital Territory. (c) Includes Northern Territory. (d) Includes Northern Territory.

**Miscellaneous war pensions**

The Commission is also responsible for the payment of pensions and allowances to beneficiaries under the *Seamen's War Pensions and Allowances Act* 1940-1970 and Cabinet decisions granting eligibility to persons who were attached to the armed forces during war-time.

The following table shows the number and class of pensions and the annual liability at 30 June 1970, and the table thereafter shows the amounts paid during the years 1965-66 to 1969-70 and the place of payment.

**MISCELLANEOUS WAR PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY, AUSTRALIA, 30 JUNE 1970**

Class	Number of pensions in force at 30 June 1970			Annual pension liability at 30 June (\$'000)
	Members(a)	Dependants of members	Dependants of deceased members	
Act of grace . . . . .	118	141	53	312
Seamen's war pension . . . . .	81	99	70	250
New Guinea civilians . . . . .	1	..	68	69
<b>Total . . . . .</b>	<b>200</b>	<b>240</b>	<b>191</b>	<b>631</b>
				<b>304</b>

(a) 'Member' in this context is a person in respect of whose wartime experience a pension is paid.

**MISCELLANEOUS WAR PENSIONS: AMOUNT PAID, STATES, ETC.  
1965-66 TO 1969-70  
(\$'000)**

Place of payment	1965-66(a)	1966-67	1967-68	1968-69(a)	1969-70
New South Wales(b)	161	148	159	174	176
Victoria . . . . .	76	71	71	87	84
Queensland . . . . .	46	44	44	46	47
South Australia(c)	34	29	29	30	31
Western Australia . . . . .	20	20	20	23	25
Tasmania . . . . .	4	4	4	4	4
Overseas . . . . .	3	1	1	1	1
<b>Total . . . . .</b>	<b>344</b>	<b>317</b>	<b>328</b>	<b>365</b>	<b>368</b>

(a) Includes five 12-weekly payments. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

**Service pensions**

The *Repatriation Act* 1920-1970 provides for a service pension to be paid, subject to a means test on income and property, to the following persons:

- ex-servicemen who served in a theatre of war (or in a designated *Operational* or *Special Overseas Service* area) and have attained the age of sixty years or are permanently unemployable;
  - ex-servicemen who suffer from pulmonary tuberculosis, irrespective of the area of their service; and
  - ex-servicewomen who suffer from tuberculosis, or who served in a theatre of war, or served abroad or embarked for service abroad and have attained the age of fifty-five years, or are permanently unemployable.
- veterans of the South African War 1899-1902 who were members of a naval or military force or contingent raised in Australia for active service in that war.

**Rates of pension**

Maximum service pension rates and allowances are the same as those paid to Age and Invalid pensioners under the *Social Services Act*. The means test provisions relating to payments are similar.

For information on conditions relating to the various rates and allowances and the operation of the means test, see Chapter 13, Welfare Services.



From 1 April 1971, the maximum weekly rates are as follows.

*Standard (Single) Rate*, \$16; *Standard (Married) Rate* (wife not eligible for Age or Invalid pension) Husband \$16; wife if otherwise eligible, \$7; *Married Rate* (wife receiving Age or Invalid pension from Department of Social Services), \$14.25; *Guardian's Allowance*, \$4 (\$6 if caring for a child under 6 years or an invalid child requiring full time care); *Supplementary assistance*, \$2; *Additional pension for eligible children*, \$2.50 for first and \$3.50 for each subsequent child; In addition \$0.25 is payable in respect of the 2nd, 3rd and 4th children.

An ex-serviceman or ex-servicewoman in receipt of a service pension is entitled, with certain exceptions, to free medical benefits for disabilities not caused by war service. These benefits include general practitioner service, specialist service where necessary, full pharmaceutical benefits, surgical aids and appliances (including spectacles), dental treatment, and treatment in Repatriation General Hospitals.

### Operations

#### SERVICE PENSIONS: SUMMARY, AUSTRALIA, 1969-70

	South African War	1914-18 War	1939-45 War(a)	Korea- Malaya operations	Special Overseas Service	Miscel- laneous (b)	Total
New claims granted . . . . .	1	3,246	9,916	88	2	6	13,259
Restorations . . . . .	1	750	885	6	..	..	1,642
Cancellations (gross) . . . . .	1	848	2,001	7	1	..	2,858
Deaths . . . . .	18	3,250	1,506	5	1	1	4,781
Pensions in force at 30 June 1970	150	37,516	36,541	181	1	31	74,420
Annual liability at 30 June 1970							
\$'000	85	21,714	19,039	76	..	15	40,929
Amount paid in pensions during 1969-70 . . . . .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	39,912

(a) Includes native members of the forces. (b) Act of grace pensions.

#### SERVICE PENSIONS: SUMMARY, AUSTRALIA, 1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
New claims granted . . . . .	8,048	8,578	8,880	7,479	13,259
Restorations . . . . .	1,052	1,056	1,052	780	1,642
<i>Total additions</i> . . . . .	9,100	9,634	9,932	8,259	(a)14,901
Cancellations (gross) . . . . .	4,259	4,197	4,017	5,009	2,858
Deaths . . . . .	4,000	4,362	4,373	4,601	4,781
<i>Total reductions</i> . . . . .	8,259	8,559	8,390	9,610	7,639

(a) Part of the increase in 1969-70 is due to variation in the Means Test in September 1969. See Chapter 13—Welfare Services.

### Classes of service pensions

The following tables give an analysis of the total number of new claims granted and pensions in force for 1969-70.

#### SERVICE PENSIONS: NEW CLAIMS GRANTED, AUSTRALIA, 1969-70

Class	South African War	1914-18 War	1939-45 War(a)	Korea- Malaya operations	Special Overseas Service	Miscel- laneous	Total
Ex-servicemen . . . . .	1	2,212	6,923	44	1	4	9,185
Wives and widows of ex-servicemen . . . . .	..	1,009	2,333	19	1	2	3,364
Children . . . . .	..	25	660	25	..	..	710
<b>Total</b> . . . . .	<b>1</b>	<b>3,246</b>	<b>9,916</b>	<b>88</b>	<b>2</b>	<b>6</b>	<b>13,259</b>

(a) Includes native members of the forces.

## SERVICE PENSIONS: NUMBER IN FORCE, STATES, 30 JUNE 1970

State	South African War	1914-18 War	1939-45 War(a)	Korea-Malaya operations	Special Overseas Service	Miscellaneous	Total
New South Wales(b)	32	11,951	11,406	73	..	3	23,465
Victoria	25	10,359	7,877	30	1	15	18,307
Queensland	30	6,052	8,005	37	..	4	14,128
South Australia(c)	29	4,317	3,372	16	..	6	7,740
Western Australia	30	3,495	4,237	18	..	3	7,783
Tasmania	4	1,342	1,644	7	..	..	2,997
Australia	150	37,516	36,541	181	1	31	74,420

(a) Includes native members of the forces. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

## Number, by class, of service pensions and amount paid

The following tables show the number of each class of service pension in force, the annual liability and the amounts paid for the years 1965-66 to 1969-70.

## SERVICE PENSIONS: NUMBER OF EACH CLASS OF PENSION AND ANNUAL LIABILITY AUSTRALIA, 1965-66 TO 1969-70

Number of service pensions at 30 June payable to—								
Year	Ex-servicemen who are—			Dependants(a) of ex-servicemen where the ex-serviceman is—		Miscellaneous	Total	Annual pension liability at 30 June (\$'000)
	Aged ex-servicemen	Permanently unemployable	Suffering from pulmonary tuberculosis	Aged or permanently unemployable	Suffering from pulmonary tuberculosis			
1965-66	34,403	14,396	1,070	14,716	1,299	10	65,894	26,637
1966-67	34,814	14,512	1,073	15,421	1,152	21	66,993	31,239
1967-68	35,254	14,874	1,049	16,237	1,091	22	68,527	31,436
1968-69	35,404	14,797	1,060	14,910	975	22	67,168	33,273
1969-70	37,792	17,362	1,154	17,058	1,023	31	74,420	40,929

(a) Includes dependants of deceased service pensioners.

SERVICE PENSIONS: AMOUNT PAID, STATES, ETC.  
1965-66 TO 1969-70  
(\$'000)

Place of payment	1965-66	1966-67	1967-68	1968-69	1969-70
New South Wales(a)	9,499	9,998	10,844	11,358	12,806
Victoria	6,626	6,720	7,420	8,070	9,767
Queensland	4,477	4,715	5,292	5,799	7,184
South Australia(b)	3,025	3,134	3,416	3,710	4,253
Western Australia	3,571	3,612	3,777	4,071	4,491
Tasmania	964	935	1,014	1,093	1,404
Overseas	10	11	8	7	8
Australia	28,172	29,126	31,771	34,108	39,912

(a) Includes Australian Capital Territory. (b) Includes Northern Territory.

## Medical treatment for ex-servicemen and dependants of ex-servicemen

Medical treatment is provided for all disabilities which have been accepted as due to war service. In addition, and subject to certain conditions, treatment is provided for disabilities not due to war service for: ex-servicemen and ex-servicewomen receiving war pensions at or exceeding the maximum general (100 per cent) rate; ex-servicemen who have contracted pulmonary tuberculosis; nurses who served in the 1914-18 war; widows and certain dependants of ex-servicemen whose deaths have been accepted as due to war service and of deceased T.P.I. pensioners; and certain service pensioners, including service pensioners of the South African War 1899-1902.

In-patient treatment for eligible patients is provided at the six Repatriation General Hospitals (one in each State) and seven auxiliary hospitals and sanatoriums as follows: *New South Wales*—Lady Davidson Hospital; *Victoria*—Macleod Hospital and Anzac Hostel; *Queensland*—Kenmore Hospital and Rosemount Hospital; *South Australia*—Birralee Hospital; and *Western Australia*—The Edward Millen Hospital. The Anzac Hostel specialises in the care and treatment of long-term patients.

The total number of available beds for patients in wards or parts of wards, open for use, in all these institutions at 30 June 1970 was 3,682, and expenditure during 1969–70 amounted to \$31,377,907. In addition, expenditure of \$37,016,939 was incurred during 1969–70 on medical services outside these institutions.

#### Repatriation hospitals and institutions

Details of full-time staff in Repatriation general hospitals and other Repatriation institutions are given in the following table.

#### REPATRIATION HOSPITALS AND INSTITUTIONS: FULL-TIME STAFF STATES, 30 JUNE 1970

Type of institution	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
General hospitals—							
Medical staff . . . . .	124	91	50	28	28	9	330
Nursing staff . . . . .	698	443	346	226	204	50	1,967
Other staff . . . . .	1,132	800	500	329	408	110	3,279
Total, general hospitals . . . . .	1,954	1,334	896	583	640	169	5,576
Other in-patient institutions(a) . . . . .	210	121	170	35	43	..	579
Out-patient clinics(a) . . . . .	171	80	20	37	25	..	333
Limb and appliance centres(a) . . . . .	73	70	29	20	14	11	217
Grand total . . . . .	2,408	1,605	1,115	675	722	180	6,705

(a) Total staff.

The following table gives details of in-patients treated at Repatriation general hospitals and other Repatriation institutions in each State. The figures shown refer to cases, e.g. a person who is admitted to hospital twice during a year is counted twice.

#### REPATRIATION GENERAL HOSPITALS AND INSTITUTIONS: IN-PATIENTS TREATED, STATES, 1969-70

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
REPATRIATION GENERAL HOSPITALS							
In-patients at beginning of year . . . . .	1,110	652	454	322	324	100	2,962
Admissions and re-admissions during year . . . . .	18,252	10,434	8,837	5,777	5,690	1,735	50,725
Total in-patients treated . . . . .	19,362	11,086	9,291	6,099	6,014	1,835	53,687
Discharges . . . . .	17,461	9,651	8,390	5,444	5,323	1,670	47,939
Deaths . . . . .	962	878	389	362	363	84	3,038
In-patients at end of year . . . . .	939	557	512	293	328	81	2,710
Average daily beds occupied . . . . .	981	599	443	290	317	86	2,717

#### OTHER REPATRIATION INSTITUTIONS

In-patients at beginning of year . . . . .	154	99	129	30	41	..	453
Admissions and re-admissions during year . . . . .	1,815	646	984	133	370	..	3,948
Total in-patients treated . . . . .	1,969	745	1,113	163	411	..	4,401
Discharges . . . . .	1,711	611	946	135	362	..	3,765
Deaths . . . . .	69	18	35	1	4	..	127
In-patients at end of year . . . . .	189	116	132	27	45	..	509
Average daily beds occupied . . . . .	190	103	130	30	38	..	491



In addition to the Repatriation institutions, eligible patients are treated in other country and metropolitan hospitals and nursing homes at Repatriation expense. During 1969-70, 16,754 Repatriation in-patients were accommodated and treated in hospitals and 1,176 in nursing homes.

Repatriation psychiatric patients requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Repatriation Department in separate wings of psychiatric hospitals administered by the State authorities. Excluding 120 on trial leave, there were 780 Repatriation patients in these hospitals at 30 June 1970.

Out-patient treatment is provided throughout the Commonwealth at Repatriation hospitals and clinics and through the Repatriation Local Medical Officer Scheme. During 1969-70, 611,562 out-patients were treated at Repatriation institutions, and visits to or by local medical officers totalled 2,820,291. The number of Repatriation local medical officers in the Commonwealth at 30 June 1970 was 6,063.

#### **Artificial limb and appliance services**

In each State the Repatriation Department maintains a limb and appliance centre, catering for patients requiring artificial limbs, surgical aids and appliances. The centres fit eligible Repatriation patients and those from other Commonwealth departments and instrumentalities, and, when possible, patients from State Government and philanthropic organisations, and private persons who cannot be fitted satisfactorily elsewhere.

Details of production at all centres during 1969-70 are as follows: arms, 181; legs, 1,652; surgical footwear, 8,638; adapted footwear, 1,761; other surgical appliances, 5,951; and repairs, 25,027.

### **General Repatriation benefits and miscellaneous**

#### **Other Repatriation Department activities**

In addition to the payment of pensions and the provision of medical treatment, the Department also provides various benefits and allowances designed to meet the needs of special classes of ex-servicemen and their dependants.

These include educational and vocational training schemes, namely the *Soldiers' Children Education Scheme* (full details of which appear later in this section), the *Korea and Malaya Training Scheme*, the *Disabled Members' Training Scheme*, the *War Widows' Training Scheme* and the *National Service Vocational Training Scheme*.

In addition, gift cars and an annual allowance for their upkeep are provided for ex-servicemen who, as a result of war service, have suffered the amputation of both legs above the knees or amputation of one leg above the knee plus any two other amputations (above the ankle or at or above the wrist) or complete paraplegia resulting in the total loss of the use of both legs. A grant of up to \$50 may be made towards the funeral expenses of eligible ex-servicemen and certain of their dependants. Payment of up to \$10 may be made to provide such necessities as meals, sleeping accommodation etc., for ex-servicemen in need of immediate relief. Also certain concessions in telephone charges are provided for some classes of ex-servicemen and their dependants, including war blinded ex-servicemen, war widows and certain service and special rate war pensioners. Ex-servicemen who have been blinded as a result of war service may be issued with talking book machines. The Australian Red Cross Society supplies 'book' records for these machines, free of charge, thus enabling the blinded to enjoy a wide range of literature.

Expenditure in 1969-70 on general Repatriation benefits for all wars was \$4,943,000, comprising: *Soldiers' Children Education Scheme*, \$3,204,000; recreation transport allowance, \$688,000; and other benefits \$1,051,000. In addition, \$20,000 was expended by other Commonwealth authorities on Repatriation employment and vocational training.

Trust and other funds administered by the Department in addition to general departmental expenditure as at 30 June 1970 amounted to \$11,346,160 in securities and \$716,025 in cash, a total of \$12,062,185.

Reciprocal arrangements with the United Kingdom, New Zealand and other countries provide for the payment of pensions, etc., to eligible Australian ex-servicemen living overseas and to eligible ex-servicemen from overseas who are living in Australia. During 1969-70, \$1,838,109 was paid overseas and \$5,573,071 paid in Australia on behalf of overseas administrations.

### Soldiers' Children Education Scheme

The Soldiers' Children Education Scheme was established in 1921 and operates with the assistance of the voluntary Education Boards in each State. These Boards consist of representatives of government and non-government education authorities and of ex-service and other organisations which have a general interest in the welfare of the children of ex-servicemen. The objects of the Scheme are to assist and encourage eligible children in acquiring a standard of education compatible with their aptitude and ability, and to prepare them to enter an agricultural, commercial, professional, or industrial calling of their own choice. Eligible children are children of ex-servicemen whose deaths have been accepted as due to war service; or of ex-servicemen who died from causes not due to war service but who were receiving at the date of death a war pension at a special rate for blindness, total and permanent incapacity, pulmonary tuberculosis, or amputation of two or more limbs; or of ex-servicemen who, as a result of war service, are blinded, totally and permanently incapacitated, or receiving the special rate pension for pulmonary tuberculosis and are likely to receive such pension for a period of at least three years. From the commencement of primary education up to twelve years, school requisites and fares are provided. An education allowance is also payable for a child from commencement of secondary education or from the age of twelve years, whichever is the earlier, while the child is undertaking primary or secondary education. Further assistance beyond, or parallel with, the later years of secondary education is provided where an approved beneficiary continues with a course of specialised education or training necessary for a career. At this stage of training, in addition to the education allowance, fees are paid and text books, essential equipment and other minor benefits are provided.

All education allowances are subject to an allowed income limit test, i.e. the amount of education allowance payable depends on the amount of income a child receives over the allowed limit. The scale of maximum allowances payable to eligible children at various stages of education is as follows.

#### SOLDIERS' CHILDREN EDUCATION SCHEME WEEKLY RATES OF ALLOWANCES, 1 JANUARY 1971 (\$)

<i>Type of training</i>	<i>Living at home</i>	<i>Living away from home</i>
At school—		
Aged 12 and under 14 years . . . . .	2.18	7.28
Aged 14 „ „ 16 years . . . . .	3.30	7.28
Aged 16 „ „ 18 years . . . . .	7.28	11.25
Professional (university, etc.) . . . . .	13.46	21.16
Agricultural . . . . .	..	3.65
Industrial (apprenticeship, etc.) . . . . .	2.65	5.30

The following tables show the costs of education under the scheme for the year ended 30 June 1970 and the number of children in receipt of benefit at 30 June 1970.

#### SOLDIERS' CHILDREN EDUCATION SCHEME: EXPENDITURE, 1969-70 (\$'000)

	<i>N.S.W. (a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A. (b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Cost of education of beneficiaries—							
Under 12 years of age . . . . .	9	6	9	2	1	2	29
12 years of age and over . . . . .	1,166	842	547	290	174	140	3,159
<b>Total expenditure . . . . .</b>	<b>1,175</b>	<b>848</b>	<b>556</b>	<b>292</b>	<b>175</b>	<b>142</b>	<b>(c) 3,188</b>

(a) Includes Australian Capital Territory.  
of \$16,000.

(b) Includes Northern Territory.

(c) Excludes overseas expenditure

**SOLDIERS' CHILDREN EDUCATION SCHEME: NUMBER RECEIVING BENEFITS(a)**  
**AT 30 JUNE 1970**

<i>Type of training</i>	<i>N.S.W. (b)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A. (c)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Over- seas</i>	<i>Total</i>
At school—								
Aged under 14 years(d)	683	511	398	154	116	119	10	1,991
Aged 14 and under 16 years	942	649	463	227	142	157	14	2,594
Aged 16 and under 18 years	771	544	237	159	99	64	15	1,889
<i>Total at school</i>	<i>2,396</i>	<i>1,704</i>	<i>1,098</i>	<i>540</i>	<i>357</i>	<i>340</i>	<i>39</i>	<i>6,474</i>
Professional	450	412	174	154	96	57	8	1,351
Agricultural	9	11	13	3	2	1	..	39
Industrial	..	5	..	..	..	..	..	5
<b>Grand total</b>	<b>2,855</b>	<b>2,132</b>	<b>1,285</b>	<b>697</b>	<b>455</b>	<b>398</b>	<b>47</b>	<b>7,869</b>

(a) Refers only to children in receipt of an education allowance. (b) Includes Australian Capital Territory.  
(c) Includes Northern Territory. (d) From 12 years of age or the commencement of secondary education, whichever is the earlier.

### Settlement of returned service personnel on the land

Reference to the settlement of returned service personnel on the land will be found in the chapter Rural Industry.

### Re-establishment benefits for national servicemen

Subject to prescribed conditions, special re-establishment benefits are provided for national servicemen under the *Defence (Re-establishment) Act* 1965–1968. They apply to all national servicemen whether or not they have served on 'special service' and ensure that servicemen will not be at a disadvantage on their return to civil life. The scheme includes appropriate full or part-time training where it is necessary or desirable for effective re-settlement. The assistance includes payment of tuition fees, other associated fees and fares, and provision of books and equipment as appropriate. A training allowance is also provided for trainees undertaking full-time studies.

Re-establishment loans may be granted, subject to certain conditions, to those national servicemen in need of financial assistance for their re-establishment in civil life and who, prior to call-up, were engaged on their own account in professional practice, business, or agricultural occupations, or who, because of their call-up, were prevented from engaging in these occupations or, in any other case where it is considered desirable in the circumstances to grant a loan.

The maximum amounts of the loans are business and professional \$3,000, agricultural \$6,000.

### Repatriation—Total expenditure 1969–70

**REPATRIATION: TOTAL EXPENDITURE(a), 1965–66 TO 1969–70**  
**(\$'000)**

<i>Class</i>	<i>1965–66</i>	<i>1966–67</i>	<i>1967–68</i>	<i>1968–69</i>	<i>1969–70</i>
Pensions, allowances and other benefits	202,698	194,783	200,446	221,678	228,309
Medical treatment	50,868	55,897	59,645	62,743	68,395
Administration	10,074	11,543	12,292	13,196	14,972
Works, rent and maintenance	3,197	3,120	4,414	4,929	5,423
<b>Total expenditure</b>	<b>266,837</b>	<b>265,344</b>	<b>276,797</b>	<b>302,546</b>	<b>317,098</b>

(a) Includes expenditure by Departments other than Repatriation as follows: 1965–66, \$3,118,322; 1966–67, \$3,040,306; 1967–68, \$4,330,994; 1968–69, \$4,841,789; 1969–70, \$5,298,982.



### The Services Canteens Trust Fund

The Services Canteens Trust Fund was established under the *Services Trust Funds Act 1947*. Its funds are derived from the assets and profits of wartime services canteens, mess and regimental funds of disbanded units, and several other sources.

The total amount transferred to the Fund to 31 December 1970 was \$11,055,541. The Act prescribed that, of this, \$5 million and such further amounts as the trustees of the Fund might from time to time decide, should be devoted to the provision of education facilities for the children of eligible ex-servicemen and ex-servicewomen, and that the balance of the Fund should be used to provide relief for ex-servicemen and ex-servicewomen and their dependants in necessitous circumstances.

The Fund is administered by eleven honorary trustees appointed by the Governor-General. The trustees have power to determine the persons or groups of persons to benefit from the Fund and the extent of the benefits to be granted within the provisions of the Act, and to appoint regional committees to assist with the administration. Members of regional committees are all persons who served in the 1939-45 War or are widows of men who served during the war. The trustees and members of regional committees serve in an honorary capacity.

#### Assistance from the Fund

Persons eligible for assistance from the Fund are those who, between 3 September 1939 and 30 June 1947, served in the Australian Naval, Military or Air Forces, including members of the canteens staff of any ship of the Royal Australian Navy, persons duly accredited to any part of the Defence Forces who served in an official capacity on full-time paid duty, and their dependants. The trustees have introduced schemes for providing welfare relief for ex-servicemen and ex-servicewomen who are eligible for benefits, and for their dependants; benefits for children of eligible ex-servicemen and ex-servicewomen who are suffering from serious and incapacitating afflictions; and education benefits for the children of eligible ex-servicemen and ex-servicewomen. From its inauguration in 1947 the Fund is to be available for forty years for both welfare relief and educational benefits.

The total assistance granted under these three schemes from the inception of the Fund to 31 December 1970 was \$11,810,188 (\$390,666 during 1970) distributed as follows: *Welfare relief*, \$3,603,347 (\$118,102); *Assistance for afflicted children*, \$323,090 (\$6,445); and *Educational assistance*, \$7,883,751 (\$266,119).

For detailed information on the operation of the Fund reference should be made to the annual reports of the Services Canteens Trust Fund.

## **CHAPTER 6**

### **INTERNATIONAL RELATIONS**

#### **Relations with Commonwealth and other countries**

Australia's international relations have developed steadily since its attainment of nationhood at the beginning of this century. Initially, association with Britain and co-operation with the Commonwealth countries were a major preoccupation. These links still remain an important element of foreign policy. Australia now maintains particularly close relations with the United States of America and places considerable importance on its growing association with the countries of Asia.

##### **Commonwealth relations**

In addition to being represented at the meetings of Commonwealth Heads of Government, at meetings of Finance, Trade, Education and other Ministers, Australia maintains close co-operation with other Commonwealth countries, having High Commissions in eighteen of them. Australia is also a member of the main Commonwealth organisations and participates in intra-Commonwealth schemes providing for co-operation in economic, scientific, educational, cultural, and other fields.

##### **Relations with the Americas**

An important feature of Australia's international relations is its relationship with the United States of America. This relationship is formally expressed in the ANZUS Treaty which was signed pursuant to Articles 51 and 52 of the United Nations Charter. It provides for regular consultations between these three parties and that, in the event of armed attack on any one of them in the Pacific, the United States, Australia, and New Zealand would each act to meet the common danger in accordance with its constitutional processes.

Australia enjoys long-standing relations with Canada, a fellow member of the Commonwealth. Its relations with the other countries of the Americas are expanding, particularly in the trade field, and this is reflected in the existence of Australian diplomatic missions in, or concurrently accredited to, a number of these countries.

##### **Australia and Asia**

Relations with the neighbouring countries of Asia are an increasingly important element in Australia's foreign policy. Australia is active as a member of the South-East Asia Treaty Organisation (SEATO), as a regional member of the United Nations Economic Commission for Asia and the Far East (ECAFE), as a member of the Colombo Plan Consultative Committee, of the Asian Development Bank, and of the Asian and Pacific Council (ASPAC). Australia also maintains an active bilateral relationship with most countries in the region. The Australian Territory of Papua and New Guinea was admitted to ECAFE as a separate member in July 1970.

##### **Relations with the South Pacific**

Australia's long-standing associations with the countries of the South Pacific include a particularly close relationship with New Zealand and membership of the South Pacific Commission, the regional organisation established in 1947 to promote the economic and social development of the Pacific Islands. Australia has welcomed the emergence to independence of Fiji, Nauru, Tonga and Western Samoa.

### **Relations with Europe**

Australia's geographical remoteness from Europe has not prevented recognition of the latter's importance, and the traditional links of migration, culture, trade and investment have been strengthened by Australian participation in various European economic and scientific organisations.

### **Relations with Africa and Middle East**

Australia has significant trade and communications interests in Africa and the Middle East. It is represented in some of the countries by diplomatic and trade missions and maintains relations with others through visits by representatives and consultations in capitals where both are represented. Under the Special Commonwealth African Assistance Programme and the Australian International Award Scheme, a small proportion of Australian external aid is extended to several countries in the area.

### **United Nations**

From the time of the drafting of the United Nations Charter, Australia has taken an active role in the United Nations, primarily through participation in the General Assembly but also through membership of the Security Council (1946-47 and 1956-57), the Economic and Social Council (1948-50, 1953-55 and 1962-64), and the Trusteeship Council.

Contributions are made to various forms of international aid through the United Nations and its specialised agencies.

### **SEATO**

Following the cessation of fighting in Indo-China in 1954, Australia, with a number of other countries situated in the south-east Asian region, or having responsibilities there, supported a proposal to form a collective defence alliance to guarantee the peace and security of the region from external aggression. On 8 September 1954 Australia, France, New Zealand, Pakistan, the Philippines, Thailand, the United Kingdom and the United States signed the South-East Asian Collective Defence Treaty at Manila. They also signed a Pacific Charter stating the principles on which they had acted. A Protocol to the Treaty extended its operation to Cambodia, Laos and the free territory under the jurisdiction of the State of Vietnam, although no action on these territories would be taken except at the invitation or with the consent of the government concerned.

While primary emphasis has been placed on the defence significance of the Treaty, a civil secretariat was established to co-ordinate wide-ranging activities designed to improve the security, economic and social welfare of the peoples of the Treaty Area. These activities include studies on counter-subversion, cultural improvement, welfare projects and educational training centres. To facilitate this task the Australian Government in 1956 instituted a SEATO Aid Programme, under which by 30 June 1970 aid to the value of \$23.8 million had been given to member countries in Asia to help develop their capacity to resist aggression and subversion and to stimulate economic development. This programme is complementary to Australia's Colombo Plan contribution. Australian SEATO aid projects, completed or in progress, include the provision of geodetic survey vessels for the Philippines; military technical training schools, a vehicle base repair shop, and two 50 kW radio transmitters to Thailand; telecommunications, technical training and workshop equipment to Pakistan; corrugated iron, town water supply systems for Bien Hoa and Can Tho, surgical teams, and school textbooks for Vietnam. Australia has also provided military training, and technical training in the fields of engineering, telecommunications, naval architecture and dockyard maintenance, security procedures, and surveying for more than 245 trainees from Asian member countries. In addition a number of senior service officers of other member countries have visited Australia to foster understanding and to develop co-operation between the armed forces.

## **Participation in the United Nations**

### **Australia's contributions to the United Nations**

Australia played an active part in drafting the Charter of the United Nations at the Conference on International Organization in San Francisco in 1945 and has been a consistent supporter of the principles and objectives of the United Nations since its foundation. Australia's influence in the affairs of the United Nations has been exerted primarily through the annual debates in the General Assembly, through membership of the Security Council (1946-47 and 1956-57) and the Economic and Social Council (1948-50, 1953-55 and 1962-64), and through the Trusteeship Council. By virtue of responsibility for the administration of the Trust Territory of Nauru prior to Nauru's independence in



January 1968 and the continuing administration of the Trust Territory of New Guinea, Australia has been a member of the Trusteeship Council, as an administering power, since the Council's establishment.

In 1950 Australia joined fifteen other member States in answering the Security Council's call to help the Republic of Korea to repel Communist aggression from the north, and members of all three armed services took part in the three years of fighting which followed. Australia has also been directly involved in United Nations activities in many other parts of the world. Australia has contributed its share of the costs, both assessed and voluntary, of all United Nations peace-keeping operations, the largest of which have been the United Nations Emergency Force (UNEF) in the Middle East in 1956-57, the United Nations Operation in the Congo (ONUC) in 1960-64, and the United Nations Force in Cyprus (UNFICYP) since 1964. In addition to financial contributions, an element of fifty Australian policemen has been made available for service with UNFICYP.

Australia was a member, in 1968, of the Ad Hoc Committee on the Sea-bed and was appointed to membership of the Permanent Committee established by the Twenty-third General Assembly. In 1969-70 also, Australia was a member of the Committee on Defining Aggression.

In the economic, social and cultural sphere Australia has contributed to the work of the United Nations through membership of its specialised agencies, of the Economic and Social Council and of the United Nations Conference on Trade and Development (UNCTAD). Australia has been a member of the Trade and Development Board since its inception in 1963. It is a foundation member of one of the four Regional Economic Commissions—the Economic Commission for Asia and the Far East, the 4th, 15th and 23rd Sessions of which were held in Australia. In 1963 Australia became a regional member of ECAFE and in 1970 became a member of the Preparatory Committee for the Second United Nations Development Decade.

Australia has had varying periods of service as a member of the executive bodies of the principal specialised agencies. As a leading agricultural country, it played a large part in the establishment of the Food and Agriculture Organization (FAO) and the tenth Regional FAO Conference for Asia and the Far East was held in Canberra in August-September 1970. Australia is a member of the Board of Governors of the International Atomic Energy Agency. Australia served as a member of the governing body of the International Labour Organisation either as a titular government member or as a deputy member from 1945 to 1960 and from 1963 to 1969. It is also a member of the Executive Board of the World Health Organization, the Administrative Council of the International Telecommunications Union, the Executive Committee of the World Meteorological Organization and the Council of the Inter-Governmental Maritime Consultative Organization. It was elected to the Executive Council, the Consultative Committee for Postal Studies, the Management Council of the Universal Postal Union as well as to the United Nations Commission on International Trade Law.

Australia has also been a prominent member of the International Civil Aviation Organization since its inception, and in 1962 was re-elected to the Council as one of the nine States of principal civil aviation importance. It was a member of the executive board of the United Nations Children's Fund (UNICEF) from 1947 to 1961 and from 1966 to 1969.

### **Australia's contributions in international aid**

It is not possible to calculate precisely the total amount of financial assistance which Australia provides to developing countries, including Papua and New Guinea, by way of aid from the Commonwealth Budget each year. There is also scope for differences of opinion about what constitutes 'aid'. Nevertheless, it can be said that, all told, the Commonwealth Government will provide well over \$200 million for aid of one kind or another to developing countries, including Papua and New Guinea in 1970-71.

The table below lists various items of expenditure which can be fairly readily identified as economic (i.e. non-military) aid to developing countries:

**AUSTRALIA'S CONTRIBUTION IN INTERNATIONAL AID, 1965-66 TO 1969-70**  
(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>Bilateral programmes—</b>					
Colombo Plan—					
Economic development . . . . .	6,876	6,939	6,750	6,565	7,336
Technical assistance . . . . .	4,879	5,774	6,681	6,336	7,850
Emergency aid to Indonesia . . . . .	..	..	4,750	5,916	7,881
SEATO Aid Programme . . . . .	2,258	2,309	2,498	2,389	2,398
Indus Waters Scheme . . . . .	2,218	1,749	1,996	2,137	293
Emergency Food Aid—India . . . . .	7,381	9,479	9,500	..	..
International Grains Arrangement—					
Food Aid Convention . . . . .	..	..	..	11,853	11,578
Laos Foreign Exchange Operations Fund . . . . .	673	612	535	723	643
Special Commonwealth African Assistance Programme . . . . .	420	427	423	411	495
Commonwealth Co-operation in Education(a) . . . . .	660	700	753	749	885
South Pacific Aid Programme . . . . .	34	167	416	407	495
Other . . . . .	333	126	97	166	508
<i>Total bilateral aid . . . . .</i>	<i>25,732</i>	<i>28,282</i>	<i>34,399</i>	<i>37,653</i>	<i>40,362</i>
<b>Multilateral programmes—</b>					
International Financial Institutions—					
IDA (International Development Association)(b) . . . . .	5,684	6,005	7,134	2,020	2,820
ADB (Asian Development Bank)(b) . . . . .	..	3,795	3,795	7,589	3,795
United Nations Programmes—					
UNDP (UN Development Programme) . . . . .	1,170	1,170	1,292	1,241	1,549
UNRWA (UN Relief and Works Agency) . . . . .	180	180	180	180	180
UNHCR (UN High Commissioner for Refugees) . . . . .	100	135	134	135	175
UNICEF (UN Children's Fund) . . . . .	480	480	480	480	550
World Food Programme . . . . .	161	492	698	692	1,000
Other . . . . .	15	65	15	338	412
<i>Total multilateral aid . . . . .</i>	<i>7,790</i>	<i>12,322</i>	<i>13,728</i>	<i>12,675</i>	<i>10,480</i>
<b>Papua and New Guinea(c)—</b>					
Grant to Administration . . . . .	62,000	69,784	77,594	86,994	95,999
Expenditure by other Departments . . . . .	11,600	14,000	14,000	12,382	18,885
<i>Total Papua and New Guinea aid . . . . .</i>	<i>73,600</i>	<i>83,784</i>	<i>91,594</i>	<i>99,376</i>	<i>114,884</i>
<b>Total international aid . . . . .</b>	<b>107,122</b>	<b>124,388</b>	<b>139,721</b>	<b>149,704</b>	<b>165,726</b>

(a) Administered principally by the Department of Education and Science. (b) The Department of the Treasury has the principal responsibility for the management of Australia's participation in these organisations. (c) The grant to assist the economic development of the Territory of Papua and New Guinea is administered principally by the Department of External Territories.

The current level of Australia's aid represents about \$13 per head of its population and is 0.56 per cent of its Gross National Product. On a world comparison of official assistance flows, Australia is ranked among the first three aid donors.

Some two-thirds of Australia's aid is channelled to Papua and New Guinea (See Chapter 29, The Territories of Australia). The remainder is channelled through multilateral programmes (e.g. through the World Bank, U.N. Agencies and the Asian Development Bank) and through bilateral programmes. The following table sets out the geographic distribution of Australia's bilateral aid.

## AUSTRALIA'S BILATERAL AID BY GEOGRAPHICAL REGION AND COUNTRY

(\$'000)

Country	Cumulative total ex- penditure to 30 June 1969	Expendi- ture 1969-70	Country	Cumulative total ex- penditure to 30 June 1969	Expendi- ture 1969-70
<b>ASIA—</b>			<b>SOUTH PACIFIC—continued</b>		
Afghanistan . . .	798	81	Gilbert and Ellice Islands	146	34
Bhutan . . . . .	396	61	New Hebrides . . .	30	18
Brunei . . . . .	83	..	Tonga . . . . .	156	101
Burma . . . . .	7,901	1,253	Western Samoa . .	234	216
Cambodia ( <i>now</i> Republic of Khmer) .	3,827	802	Miscellaneous . . .	27	48
Ceylon . . . . .	13,635	998	<i>Total</i> . . . . .	1,712	1,291
India . . . . .	78,485	4,943	<b>AFRICA—</b>		
Indonesia . . . . .	33,275	14,638	Botswana . . . . .	42	30
Iran . . . . .	6	18	Gambia . . . . .	44	30
Korea . . . . .	2,077	203	Ghana . . . . .	320	86
Laos . . . . .	6,439	1,113	Kenya . . . . .	414	93
Malaysia . . . . .	20,718	2,990	Lesotho . . . . .	66	18
Maldiv Islands . . .	59	21	Malawi . . . . .	75	66
Nepal . . . . .	731	247	Mauritius . . . . .	49	27
Pakistan . . . . .	43,244	1,820	Nigeria . . . . .	810	125
Philippines . . . .	5,171	748	Rhodesia . . . . .	64	..
Singapore . . . . .	4,499	600	Sierra Leone . . .	119	36
Thailand . . . . .	20,964	3,386	Sudan . . . . .	40	4
Vietnam . . . . .	16,507	2,032	Swaziland . . . . .	32	22
Miscellaneous, i.e. administrative costs, regional projects, etc.	5,212	988	Tanzania . . . . .	363	87
<i>Total</i> . . . . .	264,027	36,942	Uganda . . . . .	99	87
<b>SOUTH PACIFIC—</b>			Zambia . . . . .	152	143
British Solomon Islands Protectorate . . . .	61	42	Miscellaneous . . .	109	18
Fiji . . . . .	1,058	832	<i>Total</i> . . . . .	2,798	872
			<b>Grand Total</b> . . .	<b>268,537</b>	<b>39,105</b>

NOTE. The cumulative totals do not include expenditure made under the Commonwealth Co-operation in Education Scheme before 1968-69.

This bilateral aid is channelled through a number of programmes, the most important of which is the Colombo Plan—a loose co-ordinating framework of donors and recipients established in 1950. Through these programmes, Australia undertakes a variety of development projects, balance of payments support programmes, provision of equipment, provision of technical assistance experts, and training of students in Australia.

The following table sets out the numbers of students who have been trained in Australia under the aid programmes.

## STUDENTS TRAINED IN AUSTRALIA UNDER AID PROGRAMMES

(Number)

Scheme	Cumulative total at 30 June 1970	Total in training at 30 June 1970	Number of new awards 1969-70
Colombo Plan . . . . .	9,660	1,635	949
SCAAP* . . . . .	667	95	128
SPAP* . . . . .	190	42	37
SEATO . . . . .	67	12	12
AIAS* . . . . .	115	7	7
<i>Total</i> . . . . .	10,699	1,791	1,133

\* The Special Commonwealth African Assistance Plan (SCAAP) was established to provide training awards to Commonwealth countries in Africa. The South Pacific Aid Programme (SPAP) provides the same sort of assistance to the islands and territories of the Pacific. A small training programme known as the Australian International Awards Scheme (AIAS) is intended to meet occasional requests from countries outside these regions, particularly those from the Commonwealth countries of the Caribbean and Mediterranean regions.



### Diplomatic representation

The Department of Foreign Affairs is responsible for advising the Minister for Foreign Affairs and the Australian Government on the conduct of foreign affairs and relations with foreign Governments. Its officers staff the Australian diplomatic service and the consular and administrative service.

In December 1970 Australia maintained the following diplomatic and consular missions overseas and full details of these missions are available from the Department of Foreign Affairs, Canberra, A.C.T.

NOTE. In certain cases the Head of Mission accredited to one country is also accredited to another country. Where this is the case the name of the country in which the Head of Mission is located is shown in brackets. Except where indicated the missions are located in capital cities.

### AUSTRALIAN MISSIONS OVERSEAS

#### Embassies (45)

Afghanistan ( <i>in</i> Pakistan)	Indonesia	Portugal
Argentina	Iran	Romania ( <i>in</i> Yugoslavia)
Austria	Ireland	South Africa (Capetown)
Belgium	Israel	Spain
Brazil (Rio de Janeiro)	Italy	Sweden
Burma	Japan	Switzerland
Cambodia ( <i>now</i> Republic of Khmer)	Korea	Thailand
Chile	Laos	Turkey, Republic of
China, Republic of (Taiwan)	Lebanon	Union of Soviet Socialist Republics
Denmark ( <i>in</i> The Netherlands)	Luxembourg ( <i>in</i> Belgium)	United Arab Republic
Ethiopia ( <i>in</i> Kenya)	Mexico	United States of America
Finland ( <i>in</i> Sweden)	Nepal ( <i>in</i> India)	Uruguay ( <i>in</i> Argentina)
France	The Netherlands	Vietnam
Germany, Federal Republic of	Norway ( <i>in</i> Sweden)	Yugoslavia
Greece	Peru ( <i>in</i> Argentina)	
	The Philippines	

#### High Commissions (18)

Britain*	Kenya	Pakistan
Canada	Malaysia	Singapore
Ceylon	Malta	Tanzania
Fiji	Mauritius ( <i>in</i> Tanzania)	Tonga ( <i>in</i> Fiji)
Ghana	New Zealand	Uganda ( <i>in</i> Kenya)
India	Nigeria	Western Samoa ( <i>in</i> Fiji)

#### Other (16)

*Military Mission in Berlin*† (*in* Germany, Federal Republic of).

*Mission to*—European Atomic Energy Community (Euratom) (Brussels); European Coal and Steel Community (Brussels); European Economic Community (Brussels); United Nations (New York); United Nations (Geneva).

*Consulate-General in*—Los Angeles; New York; San Francisco; Milan.

*Consulate in*—Geneva, Switzerland; Hamburg, Germany, Federal Republic of; New Caledonia; Portuguese Timor; Pretoria, South Africa.

*Representative in*—Nauru.

The Department of Foreign Affairs is responsible for the control and administration of all the diplomatic and consular missions listed above with the exception of the High Commission, London, which is the responsibility of the Prime Minister's Department.

Specialist officers of the Department of Trade, other Commonwealth Government Departments and the Defence Services stationed abroad are attached to Australian diplomatic or consular missions. Senior attached officers are in some cases accredited to the missions with diplomatic or consular ranks approved by the Minister for Foreign Affairs. In addition, the Department of Trade and Industry maintains Trade Commissioner posts which engage in trade promotion in a number of cities where Australia does not have diplomatic or consular representation (*see* pages 117–118).

The Department of Immigration similarly maintains offices overseas which engage in recruitment of migrants (*see* page 118).

\* Administered by Prime Minister's Department, the Australian Military Mission in Berlin.

† The Australian Ambassador to Germany is also head of

**Agents-General for States**

From early times the Australian colonies maintained agents in London to encourage immigration and to carry out commercial and financial negotiations. Since federation the States have continued to maintain Agents-General in London, all of whom work in close co-operation with the High Commissioner for Australia at Australia House, London.

**Diplomatic representatives in Australia**

There are forty-two non-Commonwealth and eleven Commonwealth countries represented by diplomatic missions in Australia.

The following list shows the diplomatic missions in Australia. Full details of Commonwealth and foreign representation in Australia are available from the Department of Foreign Affairs, Canberra. Consular representatives are not included and particulars of these are available from the Department of Foreign Affairs, Canberra. There are about 300 such representatives in Australia, and sixty countries are represented.

**DIPLOMATIC REPRESENTATIVES IN AUSTRALIA****Embassies (42)**

Argentina	Iran ( <i>in</i> Indonesia)	Romania ( <i>in</i> Japan)
Austria	Ireland	South Africa
Belgium	Israel	Spain
Brazil	Italy	Sweden
Burma	Japan	Switzerland
Cambodia ( <i>now</i> Republic of Khmer)	Korea	Thailand
Chile	Laos	Turkey, Republic of
China, Republic of (Taiwan)	Lebanon	Union of Soviet Socialist Republics
Denmark	Mexico	United Arab Republic
Finland	Nepal ( <i>in</i> Japan)	United States of America
France	The Netherlands	Uruguay
Germany, Federal Republic of	Norway	Vietnam
Greece	Peru	Yugoslavia, Socialist Federal Republic of
Indonesia	The Philippines	
	Portugal	

**High Commissioners (11)**

Britain	Ghana	New Zealand
Canada	India	Pakistan
Ceylon	Malaysia	Singapore
Fiji	Malta	

**Overseas trade representation****The Australian Trade Commissioners Service**

The Department of Trade maintains Trade Commissioners at forty-seven posts in thirty-seven countries. Twenty-eight editions of the Department of Trade's promotion periodical *Austral News* now circulate in more than 100 countries in four languages. (*See also* Australian Trade Missions in the chapter Overseas Transactions.)

The countries where Australian Trade Commissioner posts are located are shown in the following list. Except where indicated the missions are located in capital cities.

Argentina	Indonesia	Peru
Austria	Iran	The Philippines
Bahrain	Italy (Rome, Milan)	Singapore
Belgium	Japan (Tokyo, Osaka)	South Africa (Johannesburg, Cape Town)
Britain	Kenya	Sweden
Canada (Montreal, Vancouver, Ontario)	Lebanon	Switzerland
Chile	Malaysia	Thailand
China, Republic of (Taiwan)	Malta	Trinidad
France	Mexico	United Arab Republic
Germany, Federal Republic of (Bonn, Hamburg)	The Netherlands	United States of America (Washington, D.C., New York, San Francisco, Los Angeles)
Greece	New Zealand (Wellington, Auckland, Christchurch)	
Hong Kong	Pacific Islands (C/o Department of Trade, Sydney)	
India	Pakistan	

Full details of the Australian Trade Commissioner posts are available from the Department of Trade, Canberra, A.C.T.

**Australian Trade Correspondents and Marketing Officers**

Australian Trade Correspondents and Marketing Officers have no official status but supplement the work of the Trade Commissioner Service. Correspondents are located in Addis Ababa, Ethiopia; Istanbul, Turkey; Mozambique; Port Louis, Mauritius; and Tel Aviv, Israel. Marketing Officers are located in Bombay and Calcutta, India; Brussels, Belgium; Cairo, Egypt; Colombo, Ceylon; Dublin, Ireland; Madrid, Spain; Rangoon, Burma; Rio de Janeiro, Brazil; and Seoul, Korea.

**Trade Commissioners of overseas governments in Australia**

The Trade Commissioners of overseas governments in Australia are shown in the following list. Full details of Trade Representatives in Australia are available from the Department of Foreign Affairs, Canberra, A.C.T.

Britain (Canberra, Sydney, Melbourne,  
Brisbane, Adelaide, Perth)  
Canada (Sydney, Melbourne)  
Ceylon (Sydney)  
China, (Republic of Taiwan) (Sydney)  
Fiji (Sydney)

Malaysia (Sydney)  
New Zealand (Sydney, Melbourne)  
Pakistan (Sydney)  
South Africa (Melbourne)  
Sweden (Melbourne)

**Commonwealth Migration Offices overseas**

The Department of Immigration has established offices overseas to handle migration matters, and in some countries regional officers are provided. Inquiries and applications may also be made at any Australian diplomatic, consular or trade post overseas. Full details are available from the Department of Immigration, Canberra, A.C.T.



## CHAPTER 7

# POPULATION

Statistics in this chapter cover, in the main, the year 1970. More detailed figures will be found in the bulletin *Demography*, and current statistics are published in the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, and the mimeographed series *Summary of Vital and Population Statistics* and *Overseas Arrivals and Departures*. The final detailed results of the various population censuses are published in a series of printed volumes and parts (*see* list at end of this Year Book, *also* the chapter Miscellaneous—Statistical and other official publications of Australia). Pending publication of the 1966 printed volumes a series of mimeographed bulletins have been issued containing the census results in summary form.

With the proclamation of the *Constitution Alteration (Aboriginals)* 1967 on 10 August 1967 the provision in Section 127 of the Constitution requiring the exclusion of Aborigines in reckoning the numbers of the people of the Commonwealth or of a State or other part of the Commonwealth, was repealed. Accordingly, population statistics for all dates subsequent to 10 August 1967 no longer exclude full-blood Aborigines. Estimates for earlier periods back to 30 June 1961 have also been revised to include these Aborigines. However, detailed analyses of the population enumerated in the censuses of June 1961 and 1966 exclude full-blood Aborigines. Particulars of the Aboriginal population are given on pages 136–7 in this chapter.

### Types of population statistics

Statistics of the population and its characteristics for Australia or the component States and Territories or other constituent areas at specific dates are divided in three main ways.

- (i) *Those ascertained by census enumeration.* The population censuses result in comprehensive statistics of characteristics of the population, such as age, sex and birthplace.
- (ii) *Those ascertained by 'population counts'.* From time to time in specific areas there are additional enumerations of the population, which are known as population counts, because normally very little information other than the number of persons and their sex is obtained.
- (iii) *Estimates of number, sex and age.* Estimates are prepared for dates subsequent to a census, taking account of natural increase and net migration since the last census.

### The census

In Year Book No. 53 a special article was included outlining the history, purposes, legal basis, organisation, and publication of results of the population census in Australia (*see* pages 164–70 of that issue), but considerations of space preclude its repetition in this issue.

#### Early 'musters'

Although regular censuses were not instituted in the several colonies until the years specified in the table below, population returns in one form or another have existed from a very early period in the history of Australia. The earliest enumerations were known as 'musters', and although the actual results of very few of them have been preserved, it is probable that during the early days of colonisation they were of frequent occurrence. The first official 'muster' was taken in 1788 soon after the new settlement at Sydney Cove was formed, and in 1803 the first 'muster' of convicts in Van Diemen's Land (now Tasmania) was conducted.

#### Development of the census

The first regular census in Australia was taken in New South Wales in November 1828, and included the population of Moreton Bay (now Queensland) but not Van Diemen's Land (Tasmania). Particulars were asked concerning the names, ages and civil conditions of the inhabitants. The next

census was taken in 1833, and was followed by another in 1836, when arrangements were made for the enumeration of the population of the newly-established settlement at Port Phillip, (Victoria). The first censuses taken in Tasmania, Victoria and Queensland as separate colonies were in 1841, 1854 and 1861 respectively. The first regular census in South Australia was taken in 1844 and in Western Australia in 1848. The 1881 census was the first simultaneous census taken in Australia and formed part of the first simultaneous census of the British Empire.

The following table shows the total population recorded at each census conducted prior to 1891.

POPULATION (a), CENSUSES IN AUSTRALIA, 1828 TO 1886

Date	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1828- November	36,598	..	..	..	..	..	..	..	..
1833- 2 September	60,794	..	..	..	..	..	..	..	..
1836- 2 September	77,096	..	..	..	..	..	..	..	..
1841- 2 March	130,856	..	..	..	..	..	..	..	..
27 September	..	..	..	..	..	50,216	..	..	..
1844-26 February	..	..	..	17,366	..	..	..	..	..
1846-26 February	..	..	..	22,390	..	..	..	..	..
2 March	189,609	..	..	..	..	..	..	..	..
1847-31 December	..	..	..	..	..	70,164	..	..	..
1848-10 October	..	..	..	..	4,622	..	..	..	..
1851- 1 January	..	..	..	63,700	..	..	..	..	..
1 March	268,344	..	..	..	..	70,130	..	..	..
1854-26 April	..	(b)234,298	..	..	..	..	..	..	..
30 September	..	..	..	..	11,743	..	..	..	..
1855-31 March	..	..	..	85,821	..	..	..	..	..
1856- 1 March	269,722	..	..	..	..	..	..	..	..
1857-29 March	..	408,998	..	..	..	..	..	..	..
31 March	..	..	..	..	..	81,492	..	..	..
1859-31 December	..	..	..	..	14,837	..	..	..	..
1861- 7 April	350,860	538,628	(b)30,059	126,830	..	89,977	..	..	..
1864- 1 January	..	..	61,467	..	..	..	..	..	..
1866-26 March	..	..	..	163,452	..	..	..	..	..
1868- 2 March	..	..	99,901	..	..	..	..	..	..
1870- 7 February	..	..	..	..	..	99,328	..	..	..
31 March	..	..	..	..	24,785	..	..	..	..
1871- 2 April	502,998	730,198	..	185,626	..	..	..	..	..
1 September	..	..	120,104	..	..	..	..	..	..
1876-26 March	..	..	..	213,271	..	..	..	..	..
1 May	..	..	173,283	..	..	..	..	..	..
1881- 3 April	749,825	861,566	213,525	276,414	29,708	115,705	(c)3,451	..	2,250,194
1886- 1 May	..	..	322,853	..	..	..	..	..	..

(a) Excludes full-blood Aborigines. (b) Previously included with New South Wales. (c) Included with South Australia for the censuses of 1866, 1871 and 1876. Actually Northern Territory was not transferred to the Commonwealth until 1 January 1911.

### Australia-wide censuses

State and Territory populations recorded at the Australia-wide censuses taken over the period 1881 to 1966 are shown in the following table. The figures relate to the political boundaries of the several States (or Colonies) and Territories as they existed at the date of each census, except that the Northern Territory has been shown separately from South Australia for the censuses prior to its transfer from that State. The years of formation of the separate Colonies and transfer of the Territories are shown in the chapter Discovery, Colonisation and Federation of Australia (page 5).

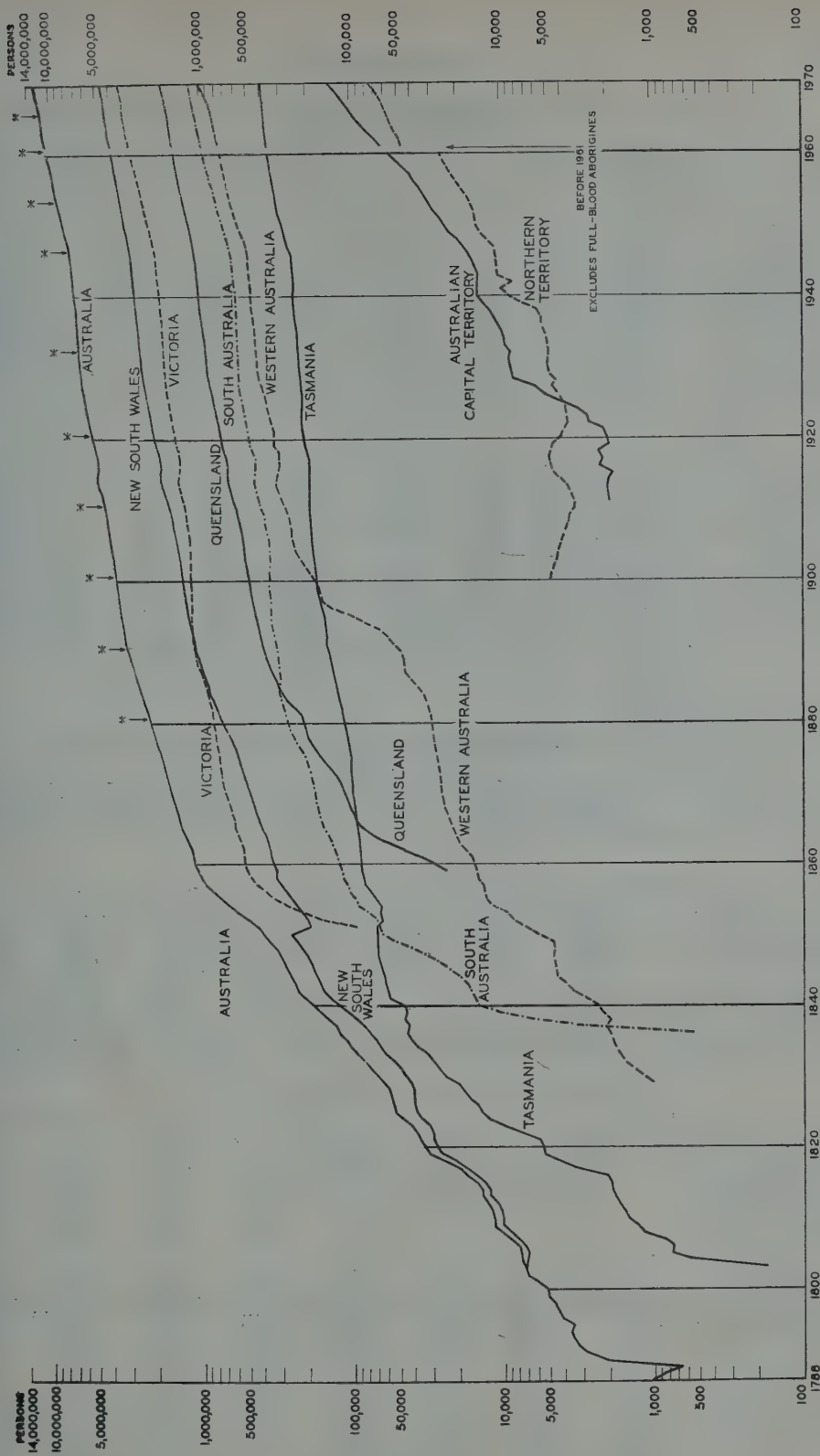
POPULATION(a), BY SEX: AUSTRALIAN CENSUSES, STATES AND TERRITORIES  
1881 TO 1966

Census	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.(b)	Aust.
MALES									
3 April 1881	410,211	451,623	125,325	146,183	17,062	61,162	3,347	..	1,214,913
5 April 1891	609,666	598,222	223,779	162,241	29,807	77,560	4,560	..	1,705,835
31 March 1901	710,005	603,720	277,003	180,485	112,875	89,624	4,216	..	1,977,928
3 April 1911	857,698	655,591	329,506	207,358	161,565	97,591	2,734	992	2,313,035
4 April 1921	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567	2,762,870
30 June 1933	1,318,471	903,244	497,217	290,962	233,937	115,097	3,378	4,805	3,367,111
30 June 1947	1,492,211	1,013,867	567,471	320,031	258,076	129,244	7,378	9,092	3,797,370
30 June 1954	1,720,860	1,231,099	676,252	403,903	330,358	157,129	10,288	16,229	4,546,118
30 June 1961	1,972,909	1,474,395	774,579	490,225	375,452	177,628	16,206	30,858	5,312,252
30 June 1966	2,124,462	1,613,904	843,897	548,530	426,691	187,390	21,508	49,977	5,816,359

For footnotes see end of table next page.

# POPULATION OF AUSTRALIA, 1788 TO 1970

LOGARITHMIC GRAPH



NOTE. THE VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO THE RATE OF INCREASE OR DECREASE, ACTUAL NUMBERS ARE INDICATED BY THE SCALE.

\* AUSTRALIAN CENSUS



POPULATION(a), BY SEX: AUSTRALIAN CENSUSES, STATES AND TERRITORIES  
1881 TO 1966—continued

Census	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.(b)	Aust.
FEMALES									
3 April 1881	339,614	409,943	88,200	130,231	12,646	54,543	104	..	1,035,281
5 April 1891	517,471	541,866	169,939	153,292	19,975	69,107	338	..	1,471,988
31 March 1901	644,841	597,350	221,126	177,861	71,249	82,851	595	..	1,795,873
3 April 1911	789,036	659,960	276,307	201,200	120,549	93,620	576	722	2,141,970
4 April 1921	1,028,870	776,556	357,003	246,893	155,454	106,037	1,046	1,005	2,672,864
30 June 1933	1,282,376	917,017	450,317	289,987	204,915	112,502	1,472	4,142	3,262,728
30 June 1947	1,492,627	1,040,834	538,944	326,042	244,404	127,834	3,490	7,813	3,781,988
30 June 1954	1,702,669	1,221,242	642,007	393,191	309,413	151,623	6,181	14,086	4,440,412
30 June 1961	1,944,104	1,455,718	744,249	479,115	361,177	172,712	10,889	27,970	5,195,934
30 June 1966	2,109,360	1,605,622	819,788	543,345	409,982	184,045	15,925	46,036	5,734,103

## PERSONS

3 April 1881	749,825	861,566	213,525	276,414	29,708	115,705	3,451	..	2,250,194
5 April 1891	1,127,137	1,140,088	393,718	315,533	49,782	146,667	4,898	..	3,177,823
31 March 1901	1,354,846	1,201,070	498,129	358,346	184,124	172,475	4,811	..	3,773,801
3 April 1911	1,646,734	1,315,551	605,813	408,558	282,114	191,211	3,310	1,714	4,455,005
4 April 1921	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
30 June 1933	2,600,847	1,820,261	947,534	580,949	438,852	227,599	4,850	8,947	6,629,839
30 June 1947	2,984,838	2,054,701	1,106,415	646,073	502,480	257,078	10,868	16,905	7,579,358
30 June 1954	3,423,529	2,452,341	1,318,259	797,094	639,771	308,752	16,469	30,315	8,986,530
30 June 1961	3,917,013	2,930,113	1,518,828	969,340	736,629	350,340	27,095	58,828	10,508,186
30 June 1966	4,233,822	3,219,526	1,663,685	1,091,875	836,673	371,435	37,433	96,013	11,550,462

(a) Excludes full-blood Aborigines.

(b) Part of New South Wales before 1911.

## Increase since 1901 census

POPULATION: INTERCENSAL INCREASES(a), STATES AND TERRITORIES  
1901 TO 1966

State or Territory	1901-1911 (10 years)	1911-1921 (10 years)	1921-1933 (12½ years)	1933-1947 (14 years)	1947-1954 (7 years)	1954-1961 (7 years)	1961-1966 (5 years)
NUMERICAL INCREASE							
New South Wales(b)	293,602	453,637	500,476	383,991	438,691	493,484	316,809
Victoria	114,481	215,729	288,981	234,440	397,640	477,772	289,413
Queensland	107,684	150,159	191,562	158,881	211,844	200,569	144,857
South Australia	50,212	86,602	85,789	65,124	151,021	172,246	122,535
Western Australia	97,990	50,618	106,120	63,628	137,291	96,858	100,044
Tasmania	18,736	22,569	13,819	29,479	51,674	41,588	21,095
Northern Territory	-1,501	557	983	6,018	5,601	10,626	10,338
A.C.T.(c)	..	858	6,375	7,958	13,410	28,513	37,185
Australia	681,204	980,729	1,194,105	949,519	1,407,172	1,521,656	1,042,276

## AVERAGE ANNUAL RATE OF INCREASE—PER CENT

New South Wales(b)	1.97	2.46	1.76	0.99	1.98	1.94	1.57
Victoria	0.91	1.53	1.42	0.87	2.56	2.58	1.90
Queensland	1.98	2.24	1.86	1.11	2.53	2.04	1.84
South Australia	1.32	1.94	1.31	0.76	3.05	2.83	2.41
Western Australia	4.36	1.66	2.29	0.97	3.51	2.03	2.58
Tasmania	1.04	1.12	0.51	0.87	2.65	1.82	1.18
Northern Territory	-3.67	1.57	1.87	5.93	6.12	7.37	6.68
A.C.T.(c)	..	4.14	10.71	4.65	8.70	9.93	10.29
Australia	1.67	2.01	1.63	0.96	2.46	2.26	1.91

(a) Excludes full-blood Aborigines.

(b) Includes Australian Capital Territory before 1911.

(c) Part of New

South Wales before 1911.

Minus sign (-) denotes decrease.

### Population estimates

The estimated population for Australia as a whole takes account of natural increase and net overseas migration since the latest census. Estimates for States and Territories are approximate, since complete records of interstate migration are not available. The population in each State and Territory is estimated by adding to the population ascertained at the census the natural increase and the recorded net gain to Australia from overseas migration for that State or Territory; gains and corresponding losses that result from movements between States and Territories are also taken into account in so far as they are recorded as transfers of residence under child endowment procedures or Commonwealth electoral procedures. These methods are supplemented by results of any special count. Holiday, business, or other similar short-term movements between the States and Territories subsequent to the census are not taken into account.

Estimates carried forward in this way eventually reach the point when another census is taken, and the numbers so ascertained supersede those resulting from the estimates. In the light of the census results the estimates for the newly completed intercensal period are revised to adjust for the differences between the new census result and the population at the census date estimated on the basis of the previous census. This is to bring intercensal estimates into line with the two census results and thus effect adjustment for unrecorded or inaccurately recorded movement of population in the intercensal period. Such a revision is made when the preliminary (field count) results of a census become available. Further revision may be necessary when the final results of a census become available.

Final revised estimates become the permanent population estimates. A mean population for twelve month periods is calculated by the method described on page 129. As populations at specific dates are used in these calculations, consequential revisions are made to mean populations when estimates for specific dates are revised as described above.

The method used for estimating State and Territory populations, as described above, is different from that used prior to June 1961 (for particulars *see* Year Book No. 52, page 191). Population estimates subsequent to the 1961 Census are based on a method which excludes holiday, business or other similar short-term movements between States and Territories since the census. As a consequence, marked quarterly seasonal movements in some States due to interstate holiday movements are reflected in population figures prior to 1961 but not for subsequent years. This has some effect on the continuity of the series of mean population figures and should be borne in mind when making calculations which use mean populations as a basis (*see* page 129). The following two aspects of seasonal movements, however, are reflected in the estimated populations of the States since 30 June 1961.

- (i) People who were on holiday or other short-term travel interstate at the time of the census are counted in the population of the State where they spent census night.
- (ii) There is some seasonal movement in the population of Australia as a whole which is due to movements of tourists and other visitors from overseas and of Australians travelling overseas for short periods.

All population statistics shown in this issue of the Year Book for dates up to and including June 1966, and all mean populations for calendar years up to 1965 and financial years up to 1965-66, are final. Population statistics for dates or years subsequent to these will be revised in accordance with the results of 1971 Census.

### Growth of population

#### ESTIMATED POPULATION(a): STATES AND TERRITORIES DECEMBER, 1900 TO 1970

31 Dec.—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.(b)	Aust.
MALES									
1900 .	716,047	601,773	274,684	180,349	110,088	89,763	4,288	..	1,976,992
1910 .	858,181	646,482	325,513	206,557	157,971	98,866	2,738	..	2,296,308
1920 .	1,067,945	753,803	396,555	245,300	176,895	107,259	2,911	1,062	2,751,730
1930 .	1,294,419	892,422	481,559	288,618	232,868	113,505	3,599	4,732	3,311,722
1940(c)	1,402,297	947,037	536,712	297,885	248,734	123,650	6,337	7,856	3,570,508
1950 .	1,627,618	1,114,497	620,329	364,705	294,758	147,103	9,414	13,021	4,191,445
1960 .	1,951,907	1,453,815	766,448	483,802	372,665	180,511	14,785	29,140	5,253,073
1966 .	2,143,521	1,628,672	855,726	554,810	439,681	188,539	31,920	51,846	5,894,715
1967 .	2,180,474	1,655,748	870,770	561,833	454,743	191,446	33,623	55,867	6,004,504
1968 .	2,222,174	1,682,914	887,288	570,986	473,779	194,665	36,112	60,636	6,128,554
1969 .	2,273,554	1,716,126	904,002	580,684	491,737	197,289	37,644	65,821	6,266,857
1970 .	2,320,562	1,747,032	921,179	592,022	509,033	199,560	39,840	72,317	6,401,545

**ESTIMATED POPULATION(a): STATES AND TERRITORIES  
DECEMBER, 1900 TO 1970—continued**

31 Dec.—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.(b)	Aust.
<b>FEMALES</b>									
1900 .	644,258	594,440	219,163	176,901	69,879	83,137	569	..	1,788,347
1910 .	785,674	654,926	273,503	200,311	118,861	94,937	563	..	2,128,775
1920 .	1,023,777	774,106	354,069	245,706	154,428	105,493	1,078	910	2,659,567
1930 .	1,251,934	900,183	435,177	285,849	198,742	111,792	1,365	3,987	3,189,029
1940(c) .	1,388,651	967,881	494,740	301,171	225,342	120,352	2,637	6,304	3,507,078
1950 .	1,613,439	1,122,685	585,089	358,138	277,891	143,230	5,006	10,558	4,116,036
1960 .	1,925,354	1,434,475	735,838	473,220	358,368	175,458	10,002	26,132	5,138,847
1966 .	2,129,786	1,621,198	832,156	549,780	423,004	185,366	26,179	48,203	5,815,672
1967 .	2,166,341	1,647,509	847,496	556,644	438,020	188,182	27,884	52,309	5,924,385
1968 .	2,206,586	1,672,847	864,540	565,401	456,979	191,366	30,443	56,585	6,044,747
1969 .	2,256,364	1,704,016	881,392	574,619	475,003	193,862	32,013	61,901	6,179,170
1970 .	2,303,335	1,733,801	898,866	585,785	492,282	196,013	34,296	67,446	6,311,824
<b>PERSONS</b>									
1900 .	1,360,305	1,196,213	493,847	357,250	179,967	172,900	4,857	..	3,765,339
1910 .	1,643,855	1,301,408	599,016	406,868	276,832	193,803	3,301	..	4,425,083
1920 .	2,091,722	1,527,909	750,624	491,006	331,323	212,752	3,989	1,972	5,411,297
1930 .	2,546,353	1,792,605	916,736	574,467	431,610	225,297	4,964	8,719	6,500,751
1940(c) .	2,790,948	1,914,918	1,031,452	599,056	474,076	244,002	8,974	14,160	7,077,586
1950 .	3,241,057	2,237,182	1,205,418	722,843	572,649	290,333	14,420	23,579	8,307,481
1960 .	3,877,261	2,888,290	1,502,286	957,022	731,033	355,969	24,787	55,272	10,391,920
1966 .	4,273,307	3,249,870	1,687,882	1,104,590	862,685	373,905	58,099	100,049	11,710,387
1967 .	4,346,815	3,303,257	1,718,266	1,118,477	892,763	379,628	61,507	108,176	11,928,889
1968 .	4,428,760	3,355,761	1,751,828	1,136,387	930,758	386,031	66,555	117,221	12,173,301
1969 .	4,529,918	3,420,142	1,785,394	1,155,303	966,740	391,151	69,657	127,722	12,446,027
1970 .	4,623,897	3,480,833	1,820,045	1,177,807	1,001,315	395,573	74,136	139,763	12,713,369

(a) Excludes full-blood Aborigines before 1961. The results of the census of 30 June 1966 have been taken into account in the preparation of estimates for dates after the census of 30 June 1961. See text page 123. (b) Part of New South Wales before 1911. (c) Includes all defence personnel enlisted in Australia irrespective of movement after enlistment.

The estimated population at 31 December each year from 1788 to 1946 is shown in *Demography*, Bulletin No. 67, 1949, and for the period 1901 to 1968 in *Demography*, Bulletin No. 85. A graph illustrating the growth of the population of Australia and of each State and Territory appears on plate 17, page 121.

**Proportions of area and of population, density and masculinity**

**PROPORTIONS OF AREA AND OF POPULATION: DENSITY AND MASCULINITY  
OF POPULATION: STATES AND TERRITORIES, 31 DECEMBER 1970**

State or Territory	Proportion of total area per cent	Proportion of population, 31 Dec. 1970 (per cent)			Density(a)	Masculinity(b)
		Males	Females	Persons		
New South Wales . . . . .	10.43	36.25	36.49	36.37	14.94	100.75
Victoria . . . . .	2.96	27.29	27.47	27.38	39.61	100.76
Queensland . . . . .	22.47	14.39	14.24	14.32	2.73	102.48
South Australia . . . . .	12.81	9.25	9.28	9.26	3.10	101.06
Western Australia . . . . .	32.88	7.95	7.80	7.88	1.03	103.40
Tasmania . . . . .	0.89	3.12	3.11	3.11	14.99	101.81
Northern Territory . . . . .	17.53	0.62	0.54	0.58	0.14	116.17
Australian Capital Territory . . . . .	0.03	1.13	1.07	1.10	148.84	107.22
<b>Australia . . . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>4.28</b>	<b>101.42</b>

(a) Number of persons per square mile. (b) Number of males per 100 females.

NOTE. Additional information about density and masculinity of population appears later in this chapter.



### Delimitation of urban centres.

The principles and criteria used for the delimitation of *urban* centres in Australia at the 1966 Census were as follows.

A boundary was defined for all settlements with a population of 1,000 or more and these were named '*urban centres*' except for the State capitals and Canberra which were named METROPOLITAN AREAS. This boundary is one which, from census to census as urbanisation proceeds, will be moved outwards to encompass any peripheral urban development.

For urban centres with a population of 30,000 and over, and for a few smaller centres, the following criteria were adopted in delimiting urban centres.

- (a) The metropolitan area or urban centre was delimited by including as urban all contiguous census collector's districts with a population density of 500 or more persons per square mile at the date of the 1966 Census.
- (b) Certain collector's districts, although not reaching the required population density were also included by virtue of—
  - (i) land use (e.g. factory areas),
  - (ii) being surrounded by urban collector's districts,
  - (iii) forming a '*bridge*' between the two urban centres less than two miles apart so that they could be regarded as one single urban centre.

For urban centres of less than 30,000 population, local government area boundaries were adopted, unless they contained a large rural component or urban development was known to extend beyond the local government boundary. In these cases they were delimited by inspection of aerial photographs, by field inspection or by consideration of any other information available and the boundaries were set as closely as possible to the periphery of the built-up area without regard to local government boundaries.

In areas with large numbers of holiday homes, many of which are unoccupied at the mid-winter census date, dwelling rather than population criteria were used. These criteria were 250 dwellings (in lieu of the 1,000 population mentioned above) and 125 dwellings per square mile (in lieu of the 500 persons per square mile mentioned above).

Because the new criteria for the delimitation of urban boundaries were adopted only shortly prior to the 1966 Census a few collector's districts containing urban growth were not split into their rural and (potentially) urban components, with the result that significant urban population remained included in large, predominantly rural, collector's districts, which did not meet the density criterion. Such cases occurred mainly around the Sydney Metropolitan Area and Urban Toowoomba. The effect on the Sydney Metropolitan Area is small, probably not more than 5,000 urban population having been omitted. In Toowoomba the effect is proportionately much greater, the urban population probably being understated by up to 3,000 persons.

### Delimitation of capital city statistical divisions and statistical districts

Around each metropolitan area and urban centre with a population of at least 75,000 and a regional population of at least 100,000 a further boundary was defined, designed to circumscribe an area which would contain the urban development of that centre for at least twenty years and which would generally be socially and economically oriented to the centre. These areas were designated STATISTICAL DIVISIONS (for State capital cities) or STATISTICAL DISTRICTS (for Canberra, Newcastle, Wollongong and Geelong). The boundaries of these areas, unlike urban boundaries, were designed to remain fixed for a number of censuses.

Changes to nomenclature since the 1966 Census have been made in accordance with a resolution of the thirty-first conference of Statisticians of Australia, 1969.

- (a) That for State capital cities, nomenclature for the area delimited by (i) the urban, and (ii) the outer boundary shall be (using Melbourne as the example)—
  - (i) Urban Melbourne, and
  - (ii) Melbourne Statistical Division;
- (b) That in other cases where the dual boundary concept is employed, the nomenclature shall be (using Newcastle as the example)—
  - (i) Urban Newcastle, and
  - (ii) Newcastle Statistical District;
- (c) That in cases where only a single boundary is delineated, the nomenclature shall be (using Cairns as the example)—
 

Urban Cairns.

## URBAN AND RURAL POPULATION(a): STATES AND TERRITORIES, CENSUS, 30 JUNE 1966

Division	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
PERSONS									
Urban—									
Metropolitan	2,446,345	2,110,168	718,822	727,916	499,969	119,469	..	92,308	6,714,997
Other	1,211,472	643,598	558,115	173,796	140,267	141,512	28,753	..	2,897,513
Rural	566,946	462,772	384,689	188,590	193,399	109,779	8,385	3,705	1,918,265
Migratory	9,059	2,988	2,059	1,573	3,038	675	295	..	19,687
Total	4,233,822	3,219,526	1,663,685	1,091,875	836,673	371,435	37,433	96,013	11,550,462
PERCENTAGES									
Urban—									
Metropolitan	57.78	65.54	43.21	66.67	59.76	32.16	..	96.14	58.14
Other	28.61	19.99	33.55	15.92	16.76	38.10	76.81	..	25.09
Rural	13.39	14.37	23.12	17.27	23.12	29.56	22.40	3.86	16.61
Migratory	0.21	0.09	0.12	0.14	0.36	0.18	0.79	..	0.17
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(a) Excludes full-blood Aborigines. See explanation of urban, rural, etc. preceding this table.

## Classification of urban centres by size

The following table classifies the urban centres in Australia into grades of size of population at the Censuses of 30 June 1961 and 1966. Corresponding details for each State and Territory at the 1966 Census was included in Year Book No. 54, page 127.

A table showing the aggregate urban population at the 1961 Census of all cities and towns outside the metropolitan area of each State with 2,000 or more and 3,000 or more urban inhabitants was included in Year Book No. 51, page 267. A table showing similar data for the 1954 Census was included in Year Book No. 47, page 295 and one for the 1947 Census in Year Book No. 40, page 334. Comparisons between these various tables can be made only if allowance is made for changes in the status and structure of local government areas and for changes in the manner of determining urban population at each census.

URBAN CENTRES: NUMBER AND POPULATION(a), BY SIZE, AUSTRALIA  
CENSUSES, 1961 AND 1966

Population size	Census, 30 June 1961			Census, 30 June 1966		
	No. of urban centres	Population	Percentage of Australian population	No. of urban centres	Population	Percentage of Australian population
500,000 and over	4	5,223,639	49.71	4	6,003,251	51.97
100,000-499,999	4	882,140	8.39	5	1,120,586	9.70
75,000-99,999	1	87,922	0.84	1	92,308	0.80
50,000-74,999	3	165,792	1.58	5	278,836	2.41
25,000-49,999	12	374,214	3.56	7	230,177	1.99
20,000-24,999	7	151,590	1.44	9	198,562	1.72
15,000-19,999	11	187,926	1.79	16	269,979	2.34
10,000-14,999	21	263,113	2.50	20	240,091	2.08
5,000-9,999	66	458,491	4.36	61	442,750	3.83
2,500-4,999	97	324,315	3.09	103	354,795	3.07
2,000-2,499	51	113,734	1.08	49	108,519	0.94
1,000-1,999	172	247,999	2.36	178	252,825	2.19
Less than 1,000(b)	30	20,158	0.19	28	19,831	0.17
500,000 and over	4	5,223,639	49.71	4	6,003,251	51.97
100,000 " " "	8	6,105,779	58.10	9	7,123,837	61.68
75,000 " " "	9	6,193,701	58.94	10	7,216,145	62.47
50,000 " " "	12	6,359,493	60.52	15	7,494,981	64.89
25,000 " " "	24	6,733,707	64.08	22	7,725,158	66.88
20,000 " " "	31	6,885,297	65.52	31	7,923,720	68.60
15,000 " " "	42	7,073,223	67.31	47	8,193,699	70.94
10,000 " " "	63	7,336,336	69.82	67	8,433,790	73.02
5,000 " " "	129	7,794,827	74.18	128	8,876,540	76.85
2,500 " " "	226	8,119,142	77.26	231	9,231,335	79.92
2,000 " " "	277	8,232,876	78.35	280	9,339,854	80.86
1,000 " " "	449	8,480,875	80.71	458	9,592,679	83.05
Total urban population	479	8,501,033	80.90	486	9,612,510	83.22

(a) Excludes full-blood Aborigines.

(b) Urban centres so classified on grounds other than population and density.

## Selected population centres

The following table shows the population of selected population centres in each State and Territory of Australia at 30 June 1966 (census) and 30 June 1970.

At the Census of 30 June 1966 new methods were used to define the boundaries of capital city and other urban areas for statistical purposes. These methods are described on page 125.

Annual post-censal population estimates are made for all local government areas. Copies of publications showing the estimated population of local government areas, statistical divisions and statistical districts can be obtained from the office of the Deputy Commonwealth Statistician in each capital city.

For the urban centres recognised at the census but not definable in terms of local government area boundaries, only a few post-censal estimates are available. For the capital cities and for some other cities and towns the definition of urban boundaries has resulted in the urban population as defined at the 1966 Census being significantly larger than the population within the corresponding local government area of the same name.

**SELECTED POPULATION CENTRES EXCEEDING 10,000 URBAN POPULATION  
STATES AND TERRITORIES 30 JUNE 1966 (CENSUS) AND 1970**

Local Government Area(a)	Urban popula- tion, 30 June 1966 (b)	Population of Statistical Division/ District or local government area at 30 June	
	1966 (b)	1966 (b)	1970
NEW SOUTH WALES—			
Sydney Statistical Division(c) . . . . .		2,542,207	2,780,310
Urban Sydney . . . . .	2,447,219	..	..
Urban Glenbrook— Faulconbridge . . . . .	13,732	..	..
Newcastle Statistical District(c) . . . . .		327,578	346,970
Urban Newcastle . . . . .	234,005	..	..
Urban Cessnock— Bellbird . . . . .	15,332	..	..
Urban Kurri Kurri— Weston . . . . .	11,567	..	..
Urban Maitland . . . . .	23,118	..	..
Wollongong Statistical District(c) . . . . .		177,456	203,110
Urban Wollongong . . . . .	162,171		
Albury . . . . .	(d)23,379	25,112	27,330
Armidale . . . . .	15,010	15,010	16,700
Bathurst . . . . .	17,230	17,230	17,550
Blue Mountains (part) (e) . . . . .	..	16,893	16,980
Urban Katoomba— Wentworth Falls . . . . .	10,525		
Broken Hill . . . . .	30,021	30,043	30,620
Dubbo . . . . .	15,589	15,589	16,640
Gosford . . . . .	11,310	42,887	51,500
Urban Woy Woy— Umina . . . . .		16,289	
Goulburn . . . . .	20,871	20,871	21,540
Grafton . . . . .	15,987	15,987	16,430
Lismore . . . . .	19,757	19,757	20,540
Lithgow . . . . .	13,165	12,811	12,770
Orange . . . . .	22,208	20,996	22,860
Queanbeyan(f) . . . . .	12,515	12,515	15,030
Tamworth . . . . .	21,683	21,683	23,850
Taree . . . . .	10,563	10,563	11,250
Wagga Wagga . . . . .	25,820	25,820	28,330
VICTORIA—			
Melbourne Statistical Division(c) . . . . .	2,110,336	2,230,793	2,425,300
Urban Melbourne . . . . .		..	..
Geelong Statistical District(c) . . . . .		111,365	119,320
Urban Geelong . . . . .	105,060	..	..
VICTORIA—continued			
Ballaarat (City) . . . . .		56,312	41,661
Ballaarat . . . . .			12,246
Bendigo . . . . .		42,209	30,806
Hamilton . . . . .		10,062	10,062
Horsham . . . . .		10,562	10,562
Mildura (City) . . . . .		12,934	12,934
Moe . . . . .			16,555
Urban Moe-Yallourn . . . . .		23,222	
Morwell . . . . .		16,635	(g)20,829
Shepparton (City) . . . . .		17,507	17,488
Traralgon (City) . . . . .		14,080	14,080
Wangaratta (City) . . . . .		15,181	15,181
Warrnambool (City) . . . . .		17,500	17,500
QUEENSLAND—			
Brisbane Statistical Division(c)(h) . . . . .			778,193
Urban Brisbane . . . . .		719,278	
Bundaberg . . . . .		25,444	25,444
Cairns . . . . .		29,453	26,802
Gladstone . . . . .		12,435	12,435
Gold Coast . . . . .		(i)49,358	49,485
Gympie . . . . .		11,286	11,286
Mackay . . . . .		24,584	18,646
Maryborough . . . . .		20,404	19,670
Mount Isa . . . . .		16,952	17,684
Rockhampton . . . . .		45,412	46,119
Toowoomba . . . . .		52,745	55,805
Townsville . . . . .		56,930	59,031
Warwick . . . . .		10,075	10,075
SOUTH AUSTRALIA—			
Adelaide Statistical Division(c) . . . . .			771,561
Urban Adelaide(j) . . . . .		728,279	..
Urban Reynella— Port Noarlunga . . . . .		11,834	
Mount Gambier (City) . . . . .		17,261	17,261
Port Augusta . . . . .		10,132	10,132
Port Pirie . . . . .		15,567	13,965
Whyalla . . . . .		22,131	22,131

For footnotes see end of table next page.



**SELECTED POPULATION CENTRES EXCEEDING 10,000 URBAN POPULATION  
STATES AND TERRITORIES 30 JUNE 1966 (CENSUS) AND, 1970—continued**

Local Government Area(a)	Urban popula- tion, 30 June	Population of Statistical Division/ District or local government area at 30 June	
	1966 (b)	1966 (b)	1970
WESTERN AUSTRALIA—			
Perth Statistical Division(c)		559,298	663,000
Urban Perth	500,246		
Albany	11,440	11,440	12,700
Bunbury	15,467	15,467	17,600
Geraldton	12,196	12,196	14,900
Kalgoorlie	..	9,203	10,200
Boulder(k)	..	12,183	13,000
Urban Kalgoorlie- Boulder	19,980	..	..
TASMANIA—			
Hobart Statistical Division(c)		141,311	150,910
Urban Hobart(l)	119,469	..	..
TASMANIA—continued			
Burnie	..	18,611	20,060
Urban Burnie- Somerset(l)	18,042		
Devonport(l)	14,874	16,758	19,240
Launceston(l)	60,456	37,217	36,620
NORTHERN TERRITORY—			
Darwin(m)	21,205	21,671	(n)32,943
AUSTRALIAN CAPITAL TERRITORY—			
Canberra Statistical District(o)		107,138	146,450
Urban Canberra	92,311	..	..

(a) Unless otherwise indicated as 'Statistical Division', 'Statistical District' or 'Urban'. (b) Population at Census date. The difference between the statistics as here published and those shown in Census publications, which exclude full-blood Aborigines, cannot be taken as reliable statistics of Aboriginal population. (c) The population of all component local government areas may be obtained from the relevant publication issued by the office of the Deputy Commonwealth Statistician of the State concerned. (d) That part of urban Albury-Wodonga in New South Wales. The total population of urban Albury-Wodonga was 32,032 at 30 June 1966. (e) That part of Blue Mountains which lies outside Sydney Statistical Division. (f) Included in Canberra Statistical District. (g) Includes part (537 persons at 30 June 1966) of urban Moe-Yallourn. (h) Includes Ipswich; the population of the City of Ipswich was 54,532 at 30 June 1966 and 59,300 at 30 June 1970. (i) That part of urban Gold Coast in Queensland. The total population of urban Gold Coast was 53,188 at 30 June 1966. (j) At 30 June 1970 the estimated population of urban Adelaide (as delineated at 30 June 1966) was 762,800. (k) The Shire of Boulder was created in December 1969 by the amalgamation of the areas which formerly comprised the Town of Boulder and the Shire of Kalgoorlie. The 1966 figure is given for the new Boulder local government area. (l) The estimated populations at 30 June 1970 of urban centres (as delineated at 30 June 1966) are: Hobart, 127,260; Burnie-Somerset, 19,710; Devonport, 17,120; Launceston, 62,500. (m) Figures given for local government area are for the proposed Greater Darwin area. (n) Result of population count. (o) Includes Queanbeyan in New South Wales. Population figures for Canberra City District are 93,314 at 30 June 1966 and 130,250 at 30 June 1970.

### Principal cities of the world

The following table shows the population of the world's largest cities at the latest available date. The data refer to urban agglomerations, where available; in other cases the so-called city proper. The urban agglomeration is defined on page 23 of the United Nations *Demographic Yearbook* 1969, from which most of the figures in the table have been taken, as including also the suburban fringe or thickly settled territory lying outside of, but adjacent to, the city boundaries. (See also the Technical Notes on Statistical Tables and footnotes to the table in the *Demographic Yearbook*). International comparability is limited by different methods used in constructing the estimates, variations in national concepts of urban boundaries, and the different dates to which the statistics refer.

## POPULATION OF THE WORLD'S LARGEST CITIES

City	Country	Year	Population ('000)	City	Country	Year	Population ('000)
New York . . . . .	U.S.A. . . . .	1968	11,551	Teheran . . . . .	Iran . . . . .	1966	(a)2,720
Tokyo . . . . .	Japan . . . . .	1968	11,350	Rome . . . . .	Italy . . . . .	1968	2,656
Buenos Aires . . . . .	Argentina . . . . .	1969	9,070	Montreal . . . . .	Canada . . . . .	1968	2,527
Paris . . . . .	France . . . . .	1968	8,197	Manchester . . . . .	England . . . . .	1968	2,452
London . . . . .	England . . . . .	1970	7,612	Birmingham . . . . .	England . . . . .	1968	2,446
Moscow . . . . .	U.S.S.R. . . . .	1970	7,061	Santiago . . . . .	Chile . . . . .	1968	2,448
Shanghai . . . . .	China . . . . .	1957	(a)6,900	Melbourne . . . . .	Australia . . . . .	1970	(b)2,425
Los Angeles . . . . .	U.S.A. . . . .	1968	6,860	Lima . . . . .	Peru . . . . .	1969	2,416
Chicago . . . . .	U.S.A. . . . .	1968	6,815	Shenyang(c) . . . . .	China . . . . .	1957	(a)2,411
Sao Paulo . . . . .	Brazil . . . . .	1968	5,685	Pittsburg . . . . .	U.S.A. . . . .	1968	2,387
Bombay . . . . .	India . . . . .	1969	(a)5,534	St. Louis . . . . .	U.S.A. . . . .	1968	2,326
Calcutta . . . . .	India . . . . .	1968	5,075	Bogota . . . . .	Colombia . . . . .	1969	2,294
Philadelphia . . . . .	U.S.A. . . . .	1968	4,828	Toronto . . . . .	Canada . . . . .	1968	2,280
Cairo . . . . .	U.A.R. . . . .	1966	(a)4,226	West Berlin(d) . . . . .	Germany . . . . .	1968	(a)2,150
Rio de Janeiro . . . . .	Brazil . . . . .	1968	4,207	Wuhan . . . . .	China . . . . .	1957	(a)2,146
Detroit . . . . .	U.S.A. . . . .	1968	4,127	Chuncking . . . . .	China . . . . .	1957	(a)2,121
Peking . . . . .	China . . . . .	1957	(a)4,010	Cleveland . . . . .	U.S.A. . . . .	1968	2,068
Leningrad . . . . .	U.S.S.R. . . . .	1970	3,950	Caracas . . . . .	Venezuela . . . . .	1969	2,064
Seoul . . . . .	Korea . . . . .	1966	(a)3,795	Madras . . . . .	India . . . . .	1969	(a)2,048
Mexico City . . . . .	Mexico . . . . .	1969	(a)3,484	Yokohama . . . . .	Japan . . . . .	1968	2,047
Boston . . . . .	U.S.A. . . . .	1968	3,239	Istanbul . . . . .	Turkey . . . . .	1965	2,043
Tientsin . . . . .	China . . . . .	1957	(a)3,220	Budapest . . . . .	Hungary . . . . .	1968	(a)2,000
Osaka . . . . .	Japan . . . . .	1968	3,078	Nagoya . . . . .	Japan . . . . .	1968	1,996
Karachi . . . . .	Pakistan . . . . .	1969	3,060	Singapore . . . . .	Singapore . . . . .	1968	(a)1,988
San Francisco . . . . .	U.S.A. . . . .	1968	2,999	Baltimore . . . . .	U.S.A. . . . .	1968	1,981
Djakarta . . . . .	Indonesia . . . . .	1961	(a)2,907	Newark . . . . .	U.S.A. . . . .	1968	1,881
Delhi . . . . .	India . . . . .	1967	2,874	Houston . . . . .	U.S.A. . . . .	1968	1,867
Madrid . . . . .	Spain . . . . .	1968	2,851	Athens . . . . .	Greece . . . . .	1961	1,853
Sydney . . . . .	Australia . . . . .	1970	(b)2,780	Canton . . . . .	China . . . . .	1957	(a)1,840
Washington . . . . .	U.S.A. . . . .	1968	2,751	Hamburg . . . . .	Germany . . . . .	1968	(a)1,826

(a) City proper. (b) Statistical Division. (c) Formerly Mukden. (d) East Berlin, 1968, population of city proper, 1,082,229.

## Mean population

The mean populations given below are calculated for twelve-month periods to provide an average basis for calculations requiring allowance for the continuous change in population figures during such periods. Mean populations are used for the calculation of rates such as crude birth, death and marriage rates and per capita rates of consumption, income, etc.

The mean population for any year has been calculated by the formula:

$$\text{Mean population} = \frac{a + 4b + 2c + 4d + e}{12}$$

where  $a, b, c, d$ , and  $e$ , respectively, are the populations at the end of the quarter immediately preceding the year and at the end of each of the four succeeding quarters; e.g. in the case of a calendar year, 31 December of the preceding year, and 31 March, 30 June, 30 September and 31 December of the year under consideration. This formula gives a close approximation to the mean of a theoretical population progressing smoothly through the five values  $a, b, c, d$ , and  $e$ .

## MEAN POPULATION(a): CALENDAR YEARS, STATES AND TERRITORIES, 1961 TO 1970

Year ended 31 Dec.—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tns.	N.T.	A.C.T.	Aust.
1961 . . . . .	3,913,967	2,926,075	1,516,334	970,118	737,596	353,628	26,272	58,852	10,502,842
1962 . . . . .	3,986,796	2,983,715	1,551,249	987,867	766,205	355,682	46,034	66,180	10,743,728
1963 . . . . .	4,050,230	3,041,442	1,578,309	1,010,500	788,457	360,590	48,330	73,300	10,951,158
1964 . . . . .	4,109,559	3,105,685	1,610,809	1,037,495	808,300	364,554	51,528	80,499	11,168,429
1965 . . . . .	4,176,686	3,165,594	1,644,028	1,066,884	826,481	367,970	54,142	88,417	11,390,202
1966 . . . . .	4,240,306	3,221,409	1,674,357	1,094,567	848,837	371,632	56,672	96,502	11,604,282
1967 . . . . .	4,308,944	3,277,131	1,702,689	1,111,675	876,997	376,588	59,664	103,725	11,817,413
1968 . . . . .	4,386,377	3,327,724	1,733,898	1,126,159	910,123	382,298	64,280	112,768	12,043,627
1969 . . . . .	4,479,435	3,387,404	1,769,121	1,145,110	947,204	388,646	68,216	122,245	12,307,381
1970 . . . . .	4,575,101	3,449,404	1,801,876	1,165,376	982,894	392,917	71,872	133,433	12,572,873

For footnote see next page.

## MEAN POPULATION(a): FINANCIAL YEARS, STATES AND TERRITORIES, 1960-61 TO 1969-70

Year ended 30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1961 .	3,875,921	2,893,417	1,503,703	957,136	729,770	350,077	25,673	55,232	10,390,929
1962 .	3,952,259	2,956,769	1,539,634	979,241	755,770	353,175	45,282	62,674	10,644,804
1963 .	4,020,774	3,011,833	1,563,347	998,510	777,413	358,180	46,960	69,557	10,846,574
1964 .	4,078,917	3,073,384	1,594,993	1,023,448	798,824	362,758	50,010	76,966	11,059,300
1965 .	4,142,568	3,136,319	1,626,935	1,052,098	817,157	366,366	52,793	84,400	11,278,636
1966 .	4,209,710	3,194,035	1,660,076	1,081,864	837,290	369,600	55,418	92,624	11,500,617
1967 .	4,272,703	3,249,913	1,688,078	1,103,973	862,130	373,916	58,081	99,925	11,708,719
1968 .	4,346,723	3,302,019	1,717,839	1,118,225	892,536	379,367	61,743	108,176	11,926,628
1969 .	4,430,183	3,355,804	1,751,476	1,135,635	928,943	385,685	66,552	117,412	12,171,690
1970 .	4,529,162	3,419,572	1,785,692	1,155,062	965,183	390,819	69,894	127,599	12,442,983

(a) Excludes full-blood Aborigines for years before 1962 (and 1961-62). Population estimates after the 1961 census are based on a method which omits holiday, business or other short term movements between States and Territories. As a consequence, marked quarterly seasonal movements in some States due to interstate holiday movements are reflected in the mean population figures for the States before 1962 (and 1961-62), but not in those for 1962 (1961-62) and subsequent years.

## Elements of increase

The 'total increase' of the population is obtained by combining 'natural increase', i.e. the excess of births over deaths, with 'net migration', i.e. the excess of arrivals over departures. Comparison of the total increase so obtained with that derived by subtracting the population recorded at one census from that recorded at the next census reveals differences which are attributable partly to differences in the coverage of the census enumerations, and partly to deficiencies in the records of the elements of increase.

In the following table figures for increase in total population include, in addition to the recorded figures for natural increase and net overseas migration gain, adjustments to make the series of increases agree with total intercensal increases revealed by successive censuses (up to the Census of 30 June 1966), and adjustments for exclusion of Aboriginal births and deaths between 30 June 1961 and 31 December 1965.

## POPULATION: ELEMENTS OF INCREASE, AUSTRALIA, 1941 TO 1970

Period	Natural increase (a)	Net overseas migration gain(b)	Increase in total population(c)		
			Males	Females	Persons
1941-45 . .	337,678	7,809	151,358	201,253	352,611
1946-50 . .	529,447	353,084	469,579	407,705	877,284
1951-55 . .	599,702	413,824	522,372	481,972	1,004,344
1956-60 . .	679,857	405,022	539,256	540,839	1,080,095
1961-65 . .	687,432	399,888	519,623	553,784	1,073,407
1966-70 . .	665,310	543,808	607,916	600,045	1,207,961
1966 . . .	119,210	86,926	101,085	103,894	204,979
1967 . . .	126,593	91,909	109,790	108,712	218,502
1968 . . .	131,359	113,053	124,050	120,362	244,412
1969 . . .	143,680	129,046	138,303	134,423	272,726
1970 . . .	144,468	122,874	134,688	132,654	267,342

(a) Excess of births registered over deaths registered. From September 1939 to June 1947, deaths of defence personnel whether overseas or in Australia are included. Excludes full-blood Aborigines before 1 January 1966. (b) Excess of recorded overseas arrivals over recorded overseas departures. Excludes troop movements for the period September 1939 to June 1947. (c) Increase in total population as recorded at censuses or as estimated for intercensal periods. Excludes full-blood Aborigines before 30 June 1961.

## Rate of population growth

In the following two tables natural increase refers to the excess of births over deaths, net migration refers to excess of overseas arrivals over departures (excluding overseas movement of defence personnel for the period of September 1939 to June 1947) and total increase is the sum of natural increase and net migration together with adjustments to make the series of increases agree with total intercensal increases revealed by successive census results (up to the Census of 30 June 1966).



The average annual rate of total increase is computed by the formula:

$$P_t = P_0 (1 + r)^t$$

where  $P_0$  and  $P_t$  are the populations at the beginning and end respectively of a  $t$ -year period and  $r$  is the average annual rate of growth. The average annual rate of natural increase and net migration is computed by dividing the average annual rate of total increase between its components in proportion to the fraction of total increase due to each component during the period. Differences between the sum of the rates of natural increase and of net migration and the rate of total increase are due to the intercensal adjustment.

**POPULATION(a): ANNUAL RATE OF GROWTH, AUSTRALIA  
1941 TO 1970  
(Per cent)**

<i>Period</i>	<i>Natural increase(b)</i>	<i>Net migration</i>	<i>Total increase(c)</i>
Average annual rate—			
1941-45 . . .	0.94	0.02	0.98
1946-50 . . .	1.36	0.91	2.26
1951-55 . . .	1.38	0.95	2.31
1956-60 . . .	1.40	0.83	2.22
1961-65 . . .	1.27	0.74	1.98
1966-70 . . .	1.11	0.91	2.02
Annual rate—			
1966 . . .	1.03	0.76	1.78
1967 . . .	1.08	0.79	1.87
1968 . . .	1.10	0.95	2.05
1969 . . .	1.18	1.06	2.24
1970 . . .	1.16	0.99	2.15

(a) Population on which rates calculated excludes full-blood Aborigines before 30 June 1961. (b) From September 1939 to June 1947, deaths of defence personnel, whether overseas or in Australia, are included. Excludes particulars of full-blood Aborigines before 1 January 1966. (c) Excludes full-blood Aborigines before 30 June 1961.

The average annual rate of population growth during the present century has been 1.74 per cent, but the results from year to year have deviated widely from this figure. In the following table the period 1 January 1901 to 31 December 1970 has been arranged into certain defined groups of years according to the occurrence of influences markedly affecting the growth of population.

**POPULATION(a): PERIODIC RATES OF GROWTH, AUSTRALIA  
1901 TO 1970**

<i>Period</i>	<i>Interval (years)</i>	<i>Total increase (‘000)</i>	<i>Average annual numerical increase (‘000)</i>	<i>Average annual rate of population growth (per cent)</i>		
				<i>Natural increase (b)</i>	<i>Net migration</i>	<i>Total</i>
1901 to 1913 . . .	13	1,128	87	1.55	0.49	2.04
1914 to 1923 . . .	10	862	86	1.49	0.15	1.64
1924 to 1929 . . .	6	680	113	1.26	0.62	1.88
1930 to 1939 . . .	10	569	57	0.82	0.02	0.85
1940 to 1946 . . .	7	513	73	0.98	0.01	1.01
1947 to 1952 . . .	6	1,222	204	1.37	1.19	2.54
1953 to 1961 . . .	9	1,862	207	1.40	0.79	2.17
1962 to 1970 . . .	9	2,071	230	1.16	0.85	2.00

(a) Excludes full-blood Aborigines before 1962.  
1 January 1966.

(b) Excludes full-blood Aborigines before

Up to 1913, the rate of natural increase was rising, and this factor, coupled with the impetus given to immigration from 1911 onwards by increased governmental assistance, was responsible for the comparatively high annual rate of 2.04 per cent during this period. The 1914-18 War was a dominating influence in the decade 1914-23, and its effects can be seen in the reduction of the rate from 2.04 to 1.64 per cent. From 1924 to 1929, more settled and prosperous conditions were experienced; encouraged migration was resumed on a large scale and, despite a further decline in the rate of natural increase owing to the persistent fall in the birth rate, the annual rate of growth rose to 1.88 per cent. After 1929, came the economic depression, and immigration ceased—in fact, Australia actually lost people through an excess of departures over arrivals in 1930, 1931, 1932 and 1935. The rate of natural increase also fell, and the annual rate of growth of the population fell to 0.85 per cent. With the outbreak of war in 1939, Australia entered a new phase in her demographic history. The immediate effect of the war was to increase the number of marriages and to reverse the downward trend in fertility. The number of births increased each war year from 1940 to 1945, and these increases more than offset the rise in deaths due to war casualties and higher civilian death rates. As might be expected, migration over these years was negligible. The period 1947 to 1961 was marked by a continued high natural increase and a resumption of immigration, the latter resulting in very high net gains in each of the four years 1949 to 1952. During the period 1962 to 1970 net migration has continued at the same rate as in the previous decade but there was a decline in the crude birth rate and rate of natural increase from 1962, with some recovery becoming apparent towards the end of the period.

Rates of population growth from 1901 are shown for each State and Territory of Australia in the bulletin, *Demography*. Estimated rates of growth of the population of Australia in comparison with those for other countries of the world for the period 1963-1969 are shown in the table on page 152.

### Sex distribution of the population

The number of males to each hundred females has been adopted as a measure of the 'masculinity' of the population. With the exception of some dislocation arising from the two World Wars, there was a continuous diminution of the masculinity of the population until 1945. This resulted mainly from a decline in the proportion of overseas-born in the population and in their masculinity. At the census of 1901 the overseas-born comprised 23 per cent of the population and had a masculinity of 151 per cent. By 1947 these proportions had declined to 10 per cent and 127 per cent, with a consequent decline in the masculinity of the total population. Although the proportion of overseas-born has increased since 1947, with the resumption of immigration, its masculinity has declined and there has thus been little change in the masculinity of the total population.

POPULATION(a): MASCULINITY, STATES AND TERRITORIES, DECEMBER 1900 TO 1970  
(Number of males per 100 females)

31 Dec.—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1900 . .	111.14	101.23	125.33	101.95	157.54	107.97	753.60	(b)	110.55
1910 . .	109.23	98.71	119.02	103.12	132.90	104.14	486.32	(b)	107.87
1920 . .	104.31	97.38	112.00	99.83	114.55	101.67	270.04	116.70	103.47
1930 . .	103.39	99.14	110.66	100.97	117.17	101.53	263.66	118.69	103.85
1940 . .	100.98	97.85	108.48	98.91	110.38	102.74	240.31	124.62	101.81
1950 . .	100.88	99.27	106.02	101.83	106.07	102.70	188.05	123.33	101.83
1960 . .	101.38	101.35	104.16	102.24	103.99	102.88	147.82	111.51	102.22
1966 . .	100.64	100.46	102.83	100.91	103.94	101.71	121.93	107.56	101.36
1967 . .	100.65	100.50	102.75	100.93	103.82	101.73	120.58	106.80	101.35
1968 . .	100.71	100.60	102.63	100.99	103.68	101.72	118.62	107.16	101.39
1969 . .	100.76	100.71	102.57	101.06	103.52	101.77	117.59	106.33	101.42
1970 . .	100.75	100.76	102.48	101.06	103.40	101.81	116.17	107.22	101.42

(a) Excludes full-blood Aborigines before 1961.

(b) Part of New South Wales prior to 1911.

The masculinity of the population in certain countries of the world is shown in the table on page 152.

### Age distribution of the population

The next table shows the changes which have taken place in the age distribution of the population of Australia at each census since 1871.

POPULATION(a): PROPORTIONAL AGE DISTRIBUTION, AUSTRALIA 1871 TO 1966  
(Per cent)

Census	Males				Females				Persons			
	Under 15 years	15 years and under 65	65 years and over	Total	Under 15 years	15 years and under 65	65 years and over	Total	Under 15 years	15 years and under 65	65 years and over	Total
1871 . . . . .	38.84	59.11	2.05	100	46.02	52.60	1.38	100	42.09	56.17	1.74	100
1881 . . . . .	36.36	60.81	2.83	100	41.86	56.03	2.11	100	38.89	58.61	2.50	100
1891 . . . . .	34.80	62.01	3.19	100	39.38	58.09	2.53	100	36.92	60.19	2.89	100
1901 . . . . .	33.89	61.80	4.31	100	36.51	59.88	3.61	100	35.14	60.88	3.98	100
1911 . . . . .	30.84	64.82	4.34	100	32.52	63.28	4.20	100	31.65	64.08	4.27	100
1921 . . . . .	31.64	63.88	4.48	100	31.79	63.83	4.38	100	31.71	63.86	4.43	100
1933 . . . . .	27.53	66.09	6.38	100	27.42	65.99	6.59	100	27.48	66.04	6.48	100
1947 . . . . .	25.49	67.08	7.43	100	24.62	66.71	8.67	100	25.06	66.89	8.05	100
1954 . . . . .	28.81	63.82	7.37	100	28.23	62.52	9.25	100	28.52	63.18	8.30	100
1961 . . . . .	30.61	62.16	7.23	100	29.85	60.33	9.82	100	30.23	61.26	8.51	100
1966 . . . . .	29.88	63.03	7.09	100	28.86	61.13	10.01	100	29.37	62.09	8.54	100

(a) Excludes full-blood Aborigines.

Estimates of the age distribution of population, based on the census distribution of ages and records of births, ages at death, and ages of migrants, are made for intercensal years. The following estimated age distributions of the Australian population at 30 June 1969 and 1970 will be subject to revision when the 1971 Census results for distribution of ages become available.

POPULATION: ESTIMATED AGE DISTRIBUTION(a), AUSTRALIA

Age last birthday (years)	30 June 1969			30 June 1970		
	Males	Females	Persons	Males	Females	Persons
0-4 . . . . .	596,741	567,675	1,164,416	610,394	581,227	1,191,621
5-9 . . . . .	632,087	600,765	1,232,852	634,282	602,880	1,237,162
10-14 . . . . .	594,026	565,908	1,159,934	610,758	580,376	1,191,134
15-19 . . . . .	559,174	534,550	1,093,724	568,281	543,441	1,111,722
20-24 . . . . .	534,263	504,181	1,038,444	556,943	524,240	1,081,183
25-29 . . . . .	436,119	404,098	840,217	460,655	427,075	887,730
30-34 . . . . .	387,468	364,169	751,637	402,114	375,736	777,850
35-39 . . . . .	380,187	352,115	732,302	376,168	350,424	726,592
40-44 . . . . .	408,372	379,485	787,857	408,251	377,248	785,499
45-49 . . . . .	384,421	370,618	755,039	393,198	378,978	772,176
50-54 . . . . .	318,431	319,492	637,923	320,870	320,273	641,143
55-59 . . . . .	298,048	296,631	594,679	303,672	306,494	610,166
60-64 . . . . .	236,754	240,515	477,269	242,920	246,986	489,906
65-69 . . . . .	171,568	198,194	369,762	176,222	199,950	376,172
70-74 . . . . .	119,316	166,254	285,570	122,344	168,826	291,170
75-79 . . . . .	77,672	124,582	202,254	76,187	126,253	202,440
80-84 . . . . .	41,997	73,705	115,702	42,850	76,108	118,958
85 and over . . . . .	17,993	38,705	56,698	18,462	40,621	59,083
Total . . . . .	6,194,637	6,101,642	12,296,279	6,324,571	6,227,136	12,551,707

(a) Based on the age distribution of all persons enumerated at the Census of 30 June 1966 adjusted for mis-statement of age and on subsequent births, recorded ages at death and recorded ages of migrants.

### General characteristics of the population, censuses, 1961 and 1966

Particulars of the characteristics of the population of Australia at the 1966 Census compared with the 1961 Census are shown in this section. Corresponding information for the individual States and Territories is shown in Year Book No. 54. Information concerning the industry, occupational status, and occupations of the population as recorded at the 1966 Census is given in the chapter Employment and Unemployment, and on dwellings in the chapter Housing and Building.

The characteristics dealt with in the following pages are: age; marital status; country of birth; period of residence in Australia of overseas born; nationality; religion. Further details are available in a series of mimeographed bulletins which are available from the Bureau. All tables exclude particulars of full-blood Aborigines.



## POPULATION: AGE (GROUPED AGES)(a), BY SEX, AUSTRALIA, CENSUSES, 1961 AND 1966

Age last birthday (years)	Census, 30 June 1961			Census, 30 June 1966			Increase 1961-1966
	Males	Females	Persons	Males	Females	Persons	
0-4	567,742	541,751	1,109,493	585,949	557,195	1,143,144	33,651
5-9	536,046	511,475	1,047,521	595,538	567,358	1,162,896	115,375
10-14	522,407	497,577	1,019,984	556,251	530,197	1,086,448	66,464
15-19	414,788	394,145	808,933	536,848	511,378	1,048,226	239,293
20-24	361,531	335,907	697,438	436,709	417,232	853,941	156,503
25-29	342,443	313,628	656,071	384,336	361,729	746,065	89,994
30-34	386,175	351,793	737,968	355,654	331,700	687,354	-50,614
35-39	395,247	372,669	767,916	397,463	367,099	764,562	-3,354
40-44	343,973	334,554	678,527	396,536	377,215	773,751	95,224
45-49	335,890	321,941	657,831	343,033	334,639	677,672	19,841
50-54	293,004	275,023	568,027	323,810	317,824	641,634	73,607
55-59	238,051	225,330	463,381	276,100	266,916	543,016	79,635
60-64	190,805	210,048	400,853	215,590	219,759	435,349	34,496
65-69	149,130	184,654	333,784	161,376	195,020	356,396	22,612
70-74	116,939	148,048	264,987	115,084	160,887	275,971	10,984
75-79	69,223	95,724	164,947	79,634	116,753	196,387	31,440
80-84	33,069	52,627	85,696	38,568	64,296	102,864	17,168
85 and over	15,789	29,040	44,829	17,880	36,906	54,786	9,957
Total	5,312,252	5,195,934	10,508,186	5,816,359	5,734,103	11,550,462	1,042,276

(a) Recorded ages adjusted by the distribution of ages 'not stated'.  
Minus sign (-) denotes decrease.

## POPULATION: MARITAL STATUS, BY SEX, AUSTRALIA, CENSUSES, 1961 AND 1966

Marital status	Census, 30 June 1961			Census, 30 June 1966			Increase 1961-1966
	Males	Females	Persons	Males	Females	Persons	
Never married—							
Under 15 years of age	1,626,195	1,550,803	3,176,998	1,737,738	1,654,750	3,392,488	215,490
15 years of age and over	1,098,450	770,048	1,868,498	1,246,214	899,354	2,145,568	277,070
Total never married	2,724,645	2,320,851	5,045,496	2,983,952	2,554,104	5,538,056	492,560
Married	2,364,710	2,344,754	4,709,464	2,592,236	2,578,488	5,170,724	461,260
Married but permanently separated(a)	68,172	78,367	146,539	75,149	87,218	162,367	15,828
Divorced	38,640	43,339	81,979	42,885	51,143	94,028	12,049
Widowed	116,085	408,623	524,708	122,137	463,150	585,287	60,579
Grand total	5,312,252	5,195,934	10,508,186	5,816,359	5,734,103	11,550,462	1,042,276

(a) Legally or otherwise.

## POPULATION: COUNTRY OF BIRTH, BY SEX, AUSTRALIA, CENSUSES, 1961 AND 1966

Country of birth	Census, 30 June 1961			Census, 30 June 1966			Increase 1961-1966
	Males	Females	Persons	Males	Females	Persons	
Australia	4,325,005	4,404,401	8,729,406	4,663,212	4,756,330	9,419,542	690,136
New Zealand	23,377	23,634	47,011	26,174	26,311	52,485	5,474
Europe—							
United Kingdom and Republic of Ireland(a)	400,491	354,911	755,402	474,427	434,237	908,664	153,262
Germany	57,579	51,736	109,315	55,799	52,910	108,709	-606
Greece	43,593	33,740	77,333	73,936	66,153	140,089	62,756
Italy	134,624	93,672	228,296	150,138	117,187	267,325	39,029
Malta	22,628	16,709	39,337	31,028	24,076	55,104	15,767
Netherlands	56,811	45,272	102,083	55,189	44,360	99,549	-2,534
Poland	36,395	23,654	60,049	36,496	25,145	61,641	1,592
Other	134,185	90,212	224,397	147,921	104,509	252,430	28,033
Total, Europe	886,306	709,906	1,596,212	1,024,934	868,577	1,893,511	297,299
Other countries	77,564	57,993	135,557	102,039	82,885	184,924	49,367
Total born outside Australia	987,247	791,533	1,778,780	1,153,147	977,773	2,130,920	352,140
Grand total	5,312,252	5,195,934	10,508,186	5,816,359	5,734,103	11,550,462	1,042,276

(a) Includes Ireland (undefined).  
Minus sign (-) denotes decrease.

POPULATION: OVERSEAS BORN, BY PERIOD OF RESIDENCE IN AUSTRALIA, AND SEX  
CENSUSES, 1961 AND 1966

Period of residence (years)	Census, 30 June 1961			Census, 30 June 1966			Increase 1961-1966
	Males	Females	Persons	Males	Females	Persons	
Under 1	72,162	51,169	123,331	88,608	73,252	161,860	38,529
1 and under 2	48,600	38,366	86,966	65,980	58,361	124,341	37,375
2 " " 3	47,126	42,901	90,027	58,366	51,963	110,329	20,302
3 " " 4	37,736	41,254	78,990	46,104	41,934	88,038	9,048
4 " " 5	42,600	41,284	83,884	35,623	37,279	72,902	-10,982
5 years and over	717,961	560,573	1,278,534	833,170	693,902	1,527,072	248,538
Not stated	21,062	15,986	37,048	25,296	21,082	46,378	9,330
Total	987,247	791,533	1,778,780	1,153,147	977,773	2,130,920	352,140

Minus sign (—) denotes decrease.

POPULATION: NATIONALITY (i.e. ALLEGIANCE), BY SEX  
AUSTRALIA, CENSUSES, 1961 AND 1966

Nationality	Census, 30 June 1961			Census, 30 June 1966			Increase 1961-1966
	Males	Females	Persons	Males	Females	Persons	
British(a)—							
Born in Australia	4,325,005	4,404,401	8,729,406	4,663,212	4,756,330	9,419,542	690,136
Born outside Australia	686,611	568,692	1,255,303	871,263	748,582	1,619,845	364,542
Total British	5,011,616	4,973,093	9,984,709	5,534,475	5,504,912	11,039,387	1,054,678
Foreign—							
Dutch	41,216	34,601	75,817	25,941	22,014	47,955	-27,862
German	34,317	26,172	60,489	24,262	18,559	42,821	-17,668
Greek	32,763	28,238	61,001	53,344	53,333	106,677	45,676
Hungarian	8,210	5,816	14,026	3,411	2,353	5,764	-8,262
Italian	86,941	67,068	154,009	81,632	71,781	153,413	-596
Latvian, Lithuanian and Estonian	4,176	2,936	7,112	1,751	1,068	2,819	-4,293
Polish	12,939	9,474	22,413	7,784	5,998	13,782	-8,631
Yugoslav	17,745	9,637	27,382	24,024	14,229	38,253	10,871
Other (incl. Stateless)	62,329	38,899	101,228	59,735	39,856	99,591	-1,637
Total foreign	300,636	222,841	523,477	281,884	229,191	511,075	-12,402
Grand total	5,312,252	5,195,934	10,508,186	5,816,359	5,734,103	11,550,462	1,042,276

(a) All persons of individual citizenship status who, by virtue of the *Nationality and Citizenship Act 1948-1966*, are deemed to be British subjects. Includes naturalised British. For purposes of this table Irish nationality is included with British.

Minus sign (—) denotes decrease.

POPULATION: RELIGIOUS DENOMINATIONS, BY SEX, AUSTRALIA  
CENSUSES, 1961 AND 1966

Religious denomination	Census, 30 June 1961			Census, 30 June 1966			Increase 1961-1966
	Males	Females	Persons	Males	Females	Persons	
Christian—							
Baptist	70,990	78,638	149,628	78,053	87,434	165,487	15,859
Brethren	7,265	8,228	15,493	7,434	8,082	15,516	23
Catholic, Roman(a)	602,763	536,886	1,139,649	581,934	522,035	1,103,969	-35,680
Catholic(a)	730,093	750,242	1,480,335	947,796	984,365	1,932,161	451,826
Churches of Christ	45,115	50,518	95,633	48,207	54,338	102,545	6,912
Church of England	1,834,732	1,834,208	3,668,940	1,929,663	1,947,810	3,877,473	208,533
Congregational	34,679	38,847	73,526	35,911	40,677	76,588	3,062
Orthodox	84,965	69,959	154,924	135,618	119,875	255,493	100,569
Lutheran	82,453	77,729	160,182	90,019	87,305	177,324	17,142
Methodist	528,003	548,392	1,076,395	548,392	575,918	1,124,310	47,915
Presbyterian	482,503	494,218	976,721	511,993	531,577	1,043,570	66,849
Salvation Army	24,379	26,735	51,114	27,078	29,423	56,501	5,387
Seventh-day Adventist	14,313	17,320	31,633	16,948	20,669	37,617	5,984
Protestant (undefined)	50,515	48,048	98,563	52,956	52,267	105,223	6,660
Other (including Christian undefined)	48,626	52,779	101,405	63,769	67,492	131,261	29,856
Total Christian	4,641,394	4,632,747	9,274,141	5,075,771	5,129,267	10,205,038	930,897
Non-Christian—							
Hebrew	29,571	29,758	59,329	31,301	31,970	63,271	3,942
Other	6,547	2,928	9,475	8,515	4,597	13,112	3,637
Total non-Christian	36,118	32,686	68,804	39,816	36,567	76,383	7,579
Indefinite	13,495	11,267	24,762	19,641	16,409	36,050	11,288
No religion	25,206	12,344	37,550	60,524	33,567	94,091	56,541
No reply	596,039	506,890	1,102,929	620,607	518,293	1,138,900	35,971
Grand total	5,312,252	5,195,934	10,508,186	5,816,359	5,734,103	11,550,462	1,042,276

(a) So described in individual census schedules.

Minus sign (—) denotes decrease.

## The Aboriginal population of Australia

In Year Book No. 17, pages 951-61, a brief account was given of the Australian Aboriginal population, its origin, its numbers as estimated from time to time and the steps taken for its protection. On pages 914-16 of Year Book No. 22 particulars were shown for each of the States and Territories of Australia at successive periods, while a special article dealing with the estimated number and distribution of the native population at the date of first settlement of the white race in the continent appeared on pages 687-96 of Year Book No. 23.

Aborigines have been enumerated in all censuses of the Commonwealth, but the degree of coverage and information obtained has varied substantially since 1911. Since the census taken in 1933 the adequacy of the particulars obtained has improved progressively as a result of an increasing number of Aborigines coming into contact with more populated areas.

At the 1966 Census extensive arrangements were made to obtain as full a coverage of Aborigines as possible and to enumerate fully those Aborigines 'out of contact'. Throughout Australia the assistance of Aboriginal welfare bodies, mission superintendents, station owners, patrol officers, and police was sought in an effort to include all Aborigines and to obtain complete information about them, e.g. in the Northern Territory information was obtained from missions and settlements concerning Aborigines normally resident at such locations but who were absent at the time of the census, and of Aborigines resident at such locations but who normally resided elsewhere. The two sets of information were then reconciled to produce what is considered to be a fairly complete and accurate coverage of Aborigines in the Territory.

### Selected characteristics

For details of certain selected characteristics derived from the 1966 Census see Year Book No. 56, pages 138-42. Details of all characteristics enumerated, together with details for States and Territories, and comparisons between the Aboriginal population and the total population, may be found in the publication *The Aboriginal Population of Australia* (Reference No. 2.23).

At censuses prior to the 1966 Census, the instructions relating to race were insufficient to enable respondents to classify themselves according to degree of race mixture. For example, from 1933 to 1961 persons were asked to state:

'For persons of European Race, wherever born, write "European". For non-Europeans state the race to which they belong, for example, "Aboriginal", "Chinese", "Negro", "Afghan", etc. If the person is half-caste with one parent of European race, write also "H.C.", for example "H.C. Aboriginal", "H.C. Chinese", etc.

At the 1966 Census the instructions were redesigned as follows in an endeavour to obtain precise data on race mixture and also to avoid the opprobrium attaching to the term 'half-caste':

'State each person's race. For persons of European race wherever born, write "European". Otherwise state whether Aboriginal, Chinese, Indian, Japanese, etc., as the case may be. If of more than one race give particulars, for example,  $\frac{1}{2}$  European— $\frac{1}{2}$  Aboriginal,  $\frac{3}{4}$  Aboriginal— $\frac{1}{4}$  Chinese,  $\frac{1}{2}$  European— $\frac{1}{2}$  Chinese.'

Investigations made by matching the replies of individuals at the 1961 and 1966 Censuses and by comparing overall census results with data available from the State instrumentalities responsible for Aboriginal welfare suggest that considerable doubt attaches to the validity of the replies given to the question on race at the 1966 and previous Censuses.

It has now been concluded:

- (a) that reporting by Aborigines in the 1966 Census was insufficiently precise to differentiate persons who are 50 per cent Aboriginal from those who are more than 50 per cent Aboriginal;
- (b) that similar dissections obtained at censuses prior to the 1966 Census were similarly imprecise; and
- (c) that even a total of all persons who are 50 per cent or more Aboriginal may be suspect, primarily because of the inclusion of persons who are less than 50 per cent Aboriginal and described themselves simply as 'Aboriginal', but also because of persons who are 50 per cent Aboriginal stating their race as 'European'.

Nevertheless, the statistics herein, which relate to persons who have described themselves as 50 per cent or more Aboriginal or simply as 'Aboriginal', are presented subject to these limitations in the hope that comments and suggestions will lead to the compilation of more reliable data in future censuses.

The following table shows particulars of the Aboriginal population of Australia at the Censuses of 30 June, 1954, 1961, and 1966. Because of some doubt about the accuracy of separate figures for



full-blood and half-blood Aborigines as shown in previous issues of the Year Book, their separate publication has been discontinued.

**ABORIGINAL POPULATION(a): STATES AND TERRITORIES  
CENSUSES, 1954, 1961 AND 1966**

State or Territory	Census, 1954(a)			Census, 1961(a)			Census, 1966(b)		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
New South Wales	6,278	5,935	12,213	7,494	7,222	14,716	7,343	6,876	14,219
Victoria	691	704	1,395	899	897	1,796	856	934	1,790
Queensland	8,368	7,781	16,149	10,146	9,550	19,696	9,644	9,359	19,003
South Australia	1,675	1,537	3,212	2,607	2,277	4,884	2,914	2,591	5,505
Western Australia	6,564	6,135	12,699	8,351	7,925	16,276	9,505	8,934	18,439
Northern Territory	5,990	5,798	11,788	9,013	8,747	17,760	10,651	10,468	21,119
Australia(c)	29,716	28,006	57,722	38,612	36,697	75,309	40,984	39,223	80,207

(a) Prior to the 1966 Census, Aborigines 'out of contact' were not enumerated and estimates of these were made by authorities responsible for native welfare. It is estimated that at the 1954 Census 12,956 Aborigines (of which 2,311 were estimated to be in Queensland, 1,760 in South Australia, 3,516 in Western Australia, and 5,369 in the Northern Territory) were not contacted by census collectors and were not included in the census. Increasing numbers, however, were coming into contact and at the 1961 Census it is estimated that 2,000 Aborigines in Western Australia and 1,944 in the Northern Territory were not contacted by census collectors. At the 1966 Census, efforts were made to obtain complete coverage. (b) The figures relate to those persons who described themselves in the 1966 Census as being 50 per cent or more Aboriginal or simply as 'Aboriginal'. For reasons stated above, it has not been possible to differentiate between persons who are 50 per cent Aboriginal from those who are more than 50 per cent Aboriginal. (c) Separate figures for Tasmania and the Australian Capital Territory are not shown in the following tables although in all cases the Australian totals include Aborigines enumerated in these two areas.

Torres Strait Islanders are not included in the above table, but are included in the census figures shown elsewhere in this chapter. At the 1966 Census they numbered 5,403 persons.

### Overseas arrivals and departures

This section contains summary statistics of total overseas arrivals and departures and detailed statistics of permanent movement. For information on passengers in other categories, *see* Chapter 12, Transport, Communication and Travel.

More detailed statistics of overseas arrivals and departures, covering country of residence, country of embarkation or disembarkation, mode of travel, month of arrival or departure, etc., are shown in the tables of Section II, Overseas Arrivals and Departures, of the annual bulletin *Demography*. Mimeographed bulletins, containing the latest available statistics of overseas arrivals and departures, are issued monthly and quarterly.

#### Overseas arrivals and departures since 1941

Earlier issues of the Year Book contain tables showing the increase of population by net migration from 1861 to the latest date, while information for individual years from 1901 is published in the annual bulletin *Demography*. The following table shows arrivals and departures since 1941, and refers to total movement irrespective of length of stay. Air crews and ships' crews, persons passing through Australia on board the same ship or flight, and also persons on short pleasure cruises in the south-west Pacific commencing and finishing in Australia on ships not then engaged in regular voyages, are excluded from Australian statistics of overseas arrivals and departures.

#### OVERSEAS ARRIVALS AND DEPARTURES, BY SEX: AUSTRALIA, 1941 TO 1970

Period	Total arrivals			Total departures			Excess of arrivals over departures		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
1941-45(a)	35,422	28,503	63,925	30,097	26,019	56,116	5,325	2,484	7,809
1946-50(a)	398,507	303,413	701,920	180,779	168,057	348,836	217,728	135,356	353,084
1951-55	581,300	446,566	1,027,866	340,819	273,223	614,042	240,481	173,343	413,824
1956-60	695,445	568,652	1,264,097	481,235	377,840	859,075	214,210	190,812	405,022
1961-65	1,107,419	896,215	2,003,634	906,956	696,790	1,603,746	200,463	199,425	399,888
1966-70	2,299,254	1,592,832	3,892,086	2,007,981	1,340,297	3,348,278	291,273	252,535	543,808
1966	313,219	244,372	557,591	268,313	202,352	470,665	44,906	42,020	86,926
1967	361,345	275,825	637,170	311,727	233,534	545,261	49,618	42,291	91,909
1968	465,232	306,560	771,792	403,748	254,991	658,739	61,484	51,569	113,053
1969	545,559	353,299	898,858	475,840	293,972	769,812	69,719	59,327	129,046
1970	613,899	412,776	1,026,675	548,353	355,448	903,801	65,546	57,328	122,874

(a) Excludes movements of defence personnel from September 1939 to June 1947.

**Excess of arrivals over departures**

The excess of total overseas arrivals over departures is one of the elements of population increase taken into account in preparing the estimated population for other than census dates (*see* pages 119 and 130 of this chapter). It is necessary to use statistics of total overseas arrivals and departures for this purpose, because Australian population statistics relate to the total population present in Australia at the date of the census or estimate, and not the population normally resident in Australia (which would include those temporarily overseas and exclude those temporarily visiting Australia).

**EXCESS OF ARRIVALS OVER DEPARTURES, BY SEX: AGE AND MARITAL STATUS  
AUSTRALIA, 1969 AND 1970**

Age and marital status	1969			1970		
	Males	Females	Persons	Males	Females	Persons
<b>AGE</b>						
Age last birthday on arrival or departure—						
0-4 . . . . .	8,089	7,745	15,834	7,688	6,950	14,638
5-14 . . . . .	14,061	13,306	27,367	13,915	12,582	26,497
15-24 . . . . .	19,421	12,923	32,344	18,795	12,675	31,470
25-44 . . . . .	23,695	19,362	43,057	21,260	19,070	40,330
45-64 . . . . .	3,372	4,638	8,010	2,741	4,396	7,137
65 and over . . . . .	1,081	1,353	2,434	1,147	1,655	2,802
<b>Total . . . . .</b>	<b>69,719</b>	<b>59,327</b>	<b>129,046</b>	<b>65,546</b>	<b>57,328</b>	<b>122,874</b>
<b>MARITAL STATUS</b>						
Never married—						
Under 15 years of age	22,150	21,051	43,201	22,436	20,232	42,668
15 years of age and over . . . . .	20,259	8,607	28,866	17,288	7,688	24,976
Married . . . . .	26,270	27,347	53,617	24,640	26,557	51,197
Widowed . . . . .	432	1,646	2,078	470	2,022	2,492
Divorced . . . . .	608	676	1,284	712	829	1,541
<b>Total . . . . .</b>	<b>69,719</b>	<b>59,327</b>	<b>129,046</b>	<b>65,546</b>	<b>57,328</b>	<b>122,874</b>

**Classification of travellers**

Since 1 July 1924 overseas travellers have been classified into two principal categories, distinguishing movements for short terms from movements for longer periods (including permanently). Before 1957 these categories were classified as *temporary* and *permanent*. Thereafter the categories were entitled *short-term* and *permanent and long-term*, but the basis of classification was not changed and the figures are directly comparable for the whole period. For short-term travel, overseas visitors and Australian residents are identified separately.

Revised questions for travellers were introduced in mid-1958, and these enabled the separation, from 1 January 1959, of permanent from other long-term movements and also the identification among the permanent departures of former settlers departing.

OVERSEAS ARRIVALS AND DEPARTURES: AUSTRALIA

1946 TO 1970

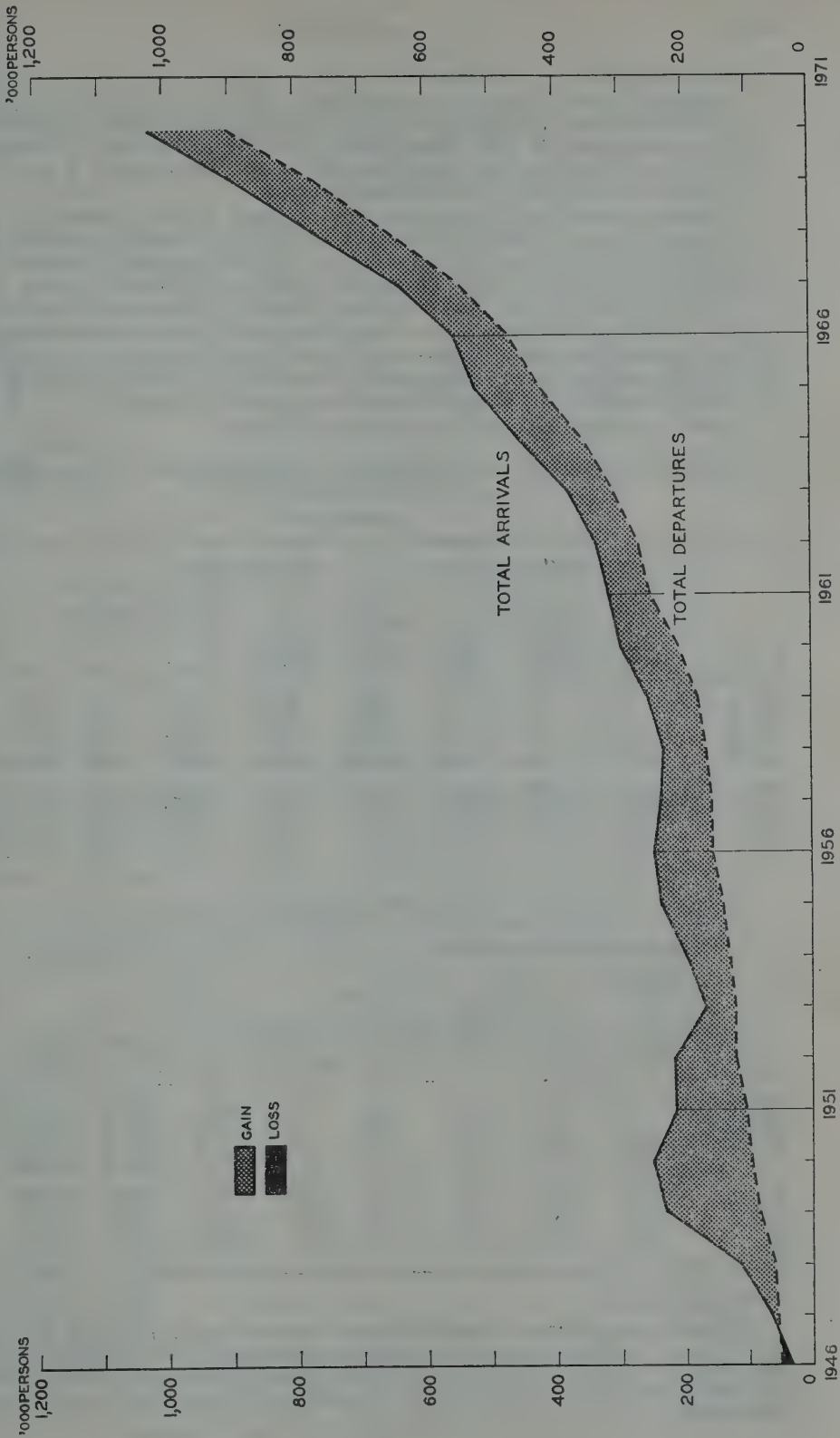


PLATE 18



The principal categories of overseas movement are as follows:

*Permanent*—consists of persons arriving with the stated intention of settling permanently in Australia (settlers), and Australian residents departing with the stated intention of residing permanently abroad; the latter include *former settlers*, i.e. persons who, on departure from Australia, stated that they had come to Australia to settle, had stayed for a period of twelve months or more and were now departing permanently.

*Long-term*—consists of the arrival of overseas visitors and the departure of Australian residents with the stated intention of staying (in Australia or in a country abroad respectively) for twelve months or more; and the departure of visitors and the return of residents who have stayed (in Australia or in a country abroad respectively) for twelve months or more.

*Short-term*—consists of all other movements, including the movement of Australian troops irrespective of period of stay, and U.S. troops visiting Australia on rest and recreation leave.

This classification is based on statements made by the traveller on arrival in, or departure from, Australia. They represent the traveller's intention at that time. Many travellers subsequently change their intentions, and this must be borne in mind in interpreting the statistics.

The numbers so classified since 1 January 1946 are as follows:

### OVERSEAS ARRIVALS AND DEPARTURES: CLASSIFICATION OF TRAVELLERS AUSTRALIA, 1946 TO 1970

#### ARRIVALS

Period	Permanent and long-term movement				Short-term movement			
	Per- manent	Long-term	Total permanent and long-term		Overseas visitors arriving			
	Settlers arriving	Australian residents returning	Overseas visitors arriving	long-term arrivals	Australian residents returning	In transit	Other	Total
								Total arrivals
1946-50 .	n.a.	n.a.	n.a.	457,988	108,736	n.a.	n.a.	135,196
1951-55 .	n.a.	n.a.	n.a.	570,090	216,949	77,825	163,002	240,827
1956-60 .	n.a.	n.a.	n.a.	615,767	309,611	84,206	254,513	338,719
1961-65 .	575,992	111,288	73,848	761,128	585,203	143,424	513,879	657,303
1966-70 .	804,063	180,741	122,405	1,107,209	1,298,500	207,379	1,278,998	1,486,377
1966 .	141,033	28,292	19,234	188,559	181,770	32,593	154,669	187,262
1967 .	135,019	35,655	21,637	192,311	223,038	36,299	185,522	221,821
1968 .	159,270	36,387	23,473	219,130	252,773	37,672	262,217	299,889
1969 .	183,416	38,308	26,867	248,591	288,990	42,485	318,792	361,277
1970 .	185,325	42,099	31,194	258,618	351,929	58,330	357,798	416,128

#### DEPARTURES

Period	Permanent and long-term movement						Short-term movement			
	Permanent			Long-term		Total per- manent and long-term depart- ures	Overseas visitors departing			
	Former settlers departing	Other residents departing	Total per- manent depart- ures	Australian residents departing	Overseas visitors departing		Australian residents departing	Overseas visitors departing	Total de- partures	
1946-50	n.a.	n.a.	n.a.	n.a.	n.a.	105,968	101,787	141,081	348,836	
1951-55	n.a.	n.a.	n.a.	n.a.	n.a.	155,509	212,978	245,555	614,042	
1956-60	n.a.	n.a.	n.a.	n.a.	n.a.	210,807	306,118	342,150	859,075	
1961-65	48,491	33,989	82,480	189,526	63,593	335,599	593,119	675,028	1,603,746	
1966-70	115,954	43,758	159,712	281,097	71,746	512,555	1,294,118	1,541,605	3,348,278	
1966	18,343	7,965	26,308	54,321	11,999	92,628	183,161	194,876	470,665	
1967	22,302	8,502	30,804	52,148	12,801	95,753	217,746	231,762	545,261	
1968	23,814	7,861	31,675	51,386	12,617	95,678	251,880	311,181	658,739	
1969	24,739	8,892	33,631	59,027	15,602	108,260	288,805	372,747	769,812	
1970	26,756	10,538	37,294	64,215	18,727	120,236	352,526	431,039	903,801	

#### Permanent movement

In the following paragraphs particulars are given of the persons who on arrival in Australia stated that they came intending to settle, and of Australian residents who on their departure from Australia stated their intention of residing permanently abroad, classified according to nationality, occupation, age, marital status, and State or Territory of intended residence (arrivals) or of last residence (departures).

## Nationality

OVERSEAS ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT  
NATIONALITY, AUSTRALIA, 1969 AND 1970

(Persons)

Nationality	1969			1970				
	Arrivals			Departures	Arrivals			Departures
	Assisted (a)	Other	Total		Assisted (a)	Other	Total	
British—								
Country of citizenship—								
Australia . . . . .	612	1,399	2,011	8,772	750	1,335	2,085	10,492
Canada . . . . .	71	1,135	1,206	347	98	1,445	1,543	410
Ceylon, India, Pakistan . . . . .	5	4,132	4,137	40	17	4,009	4,026	50
Ireland(b) . . . . .	2,259	193	2,452	370	2,246	182	2,428	427
Malta . . . . .	598	286	884	574	871	189	1,060	498
New Zealand . . . . .	58	5,808	5,866	1,553	74	4,758	4,832	2,200
South Africa(b) . . . . .	223	342	565	80	545	639	1,184	102
United Kingdom and Colonies . . . . .	68,697	8,123	76,820	14,280	65,275	7,934	73,209	14,684
Other countries . . . . .	55	1,386	1,441	171	79	1,905	1,984	193
Citizenship not stated . . . . .	3,599	2,455	6,054	1,533	4,132	1,855	5,987	1,532
<i>Total, British</i> . . . . .	<i>76,177</i>	<i>25,259</i>	<i>101,436</i>	<i>27,720</i>	<i>74,087</i>	<i>24,251</i>	<i>98,338</i>	<i>30,588</i>
American (U.S.) . . . . .	1,936	1,472	3,408	1,205	2,593	1,972	4,565	1,191
Austrian . . . . .	594	132	726	142	603	89	692	174
Belgian . . . . .	280	17	297	64	204	29	233	45
Dutch . . . . .	2,612	551	3,163	677	2,067	437	2,504	1,058
German . . . . .	3,197	493	3,690	859	2,929	418	3,347	856
Greek . . . . .	6,079	5,266	11,345	458	6,364	4,004	10,368	471
Italian . . . . .	6,341	6,310	12,651	707	6,572	2,735	9,307	723
Lebanese . . . . .	22	3,687	3,709	18	22	3,885	3,907	20
Polish . . . . .	141	209	350	69	155	171	326	82
Russian . . . . .	7	54	61	17	8	38	46	23
Spanish . . . . .	1,507	407	1,914	116	1,550	291	1,841	113
Yugoslav . . . . .	10,767	7,520	18,287	359	21,942	7,141	29,083	357
Stateless . . . . .	195	157	352	27	212	93	305	9
Other . . . . .	16,103	5,924	22,027	1,193	15,120	5,343	20,463	1,584
<i>Grand total</i> . . . . .	<i>125,958</i>	<i>57,458</i>	<i>183,416</i>	<i>33,631</i>	<i>134,428</i>	<i>50,897</i>	<i>185,325</i>	<i>37,294</i>

(a) For details of assisted passage schemes see pages 143–5. of this table.

(b) Included with 'British nationality' for the purpose

## Occupation

OVERSEAS ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT  
OCCUPATION AND SEX, AUSTRALIA, 1969 AND 1970

Occupation group	1969				1970			
	Arrivals		Departures		Arrivals		Departures	
	Males	Females	Males	Females	Males	Females	Males	Females
Professional, technical, and related workers . . . . .	6,392	3,753	1,852	1,217	6,761	3,839	2,001	1,391
Administrative, executive, and managerial workers . . . . .	3,082	393	792	96	3,157	379	1,004	100
Clerical workers . . . . .	2,910	6,797	659	1,763	2,617	6,556	820	2,239
Sales workers . . . . .	2,289	1,168	523	335	2,269	1,086	639	318
Farmers, fishermen, hunters, timber getters, and related workers . . . . .	2,062	44	277	8	1,730	32	299	14
Miners, quarrymen, and related workers . . . . .	354	..	124	..	323	..	121	..
Workers in transport and communication . . . . .	3,863	565	572	121	3,541	525	680	133
Craftsmen and production-process workers . . . . .	25,875	2,701	4,333	506	26,065	3,063	4,842	580
Labourers . . . . .	10,461	..	1,252	..	11,602	..	1,254	..
Service (protective and other), sport, and recreation workers . . . . .	2,414	4,870	456	424	2,349	4,786	553	522
Occupation inadequately described or not stated . . . . .	4,838	628	317	62	3,738	598	378	67
Persons not in work force—								
Children and students . . . . .	33,132	30,646	5,672	5,208	33,149	30,823	6,062	5,763
Others . . . . .	1,240	32,939	471	6,591	1,418	34,919	508	7,006
<i>Total</i> . . . . .	<i>98,912</i>	<i>84,504</i>	<i>17,300</i>	<i>16,331</i>	<i>98,719</i>	<i>86,606</i>	<i>19,161</i>	<i>18,133</i>

*Age and marital status*OVERSEAS ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT, BY SEX  
AGE DISTRIBUTION, AND MARITAL STATUS, AUSTRALIA, 1970

<i>Age last birthday at time of arrival or departure</i>	<i>Arrivals</i>				<i>Departures</i>			
	<i>Never married</i>	<i>Married</i>	<i>Widowed or divorced</i>	<i>Total</i>	<i>Never married</i>	<i>Married</i>	<i>Widowed or divorced</i>	<i>Total</i>
<b>MALES</b>								
0-4 . . . . .	11,897	..	..	11,897	2,265	..	..	2,265
5-14 . . . . .	18,054	..	..	18,054	3,208	..	..	3,208
15-24 . . . . .	19,377	5,316	55	24,748	2,563	714	7	3,284
25-44 . . . . .	8,305	27,539	601	36,445	2,062	5,621	130	7,813
45-64 . . . . .	387	5,533	305	6,225	203	1,736	121	2,060
65 and over . . . . .	57	991	302	1,350	32	376	123	531
<i>Total</i> . . . . .	<i>58,077</i>	<i>39,379</i>	<i>1,263</i>	<i>98,719</i>	<i>10,333</i>	<i>8,447</i>	<i>381</i>	<i>19,161</i>
<b>FEMALES</b>								
0-4 . . . . .	11,225	..	..	11,225	2,158	..	..	2,158
5-14 . . . . .	17,082	..	..	17,082	3,139	..	..	3,139
15-24 . . . . .	10,905	10,465	79	21,449	1,925	1,808	21	3,754
25-44 . . . . .	3,295	24,182	672	28,149	913	5,123	175	6,211
45-64 . . . . .	319	4,749	1,661	6,729	134	1,522	462	2,118
65 and over . . . . .	74	634	1,264	1,972	32	255	466	753
<i>Total</i> . . . . .	<i>42,900</i>	<i>40,030</i>	<i>3,676</i>	<i>86,606</i>	<i>8,301</i>	<i>8,708</i>	<i>1,124</i>	<i>18,133</i>
<b>PERSONS</b>								
0-4 . . . . .	23,122	..	..	23,122	4,423	..	..	4,423
5-14 . . . . .	35,136	..	..	35,136	6,347	..	..	6,347
15-24 . . . . .	30,282	15,781	134	46,197	4,488	2,522	28	7,038
25-44 . . . . .	11,600	51,721	1,273	64,594	2,975	10,744	305	14,024
45-64 . . . . .	706	10,282	1,966	12,954	337	3,258	583	4,178
65 and over . . . . .	131	1,625	1,566	3,322	64	631	589	1,284
<i>Total</i> . . . . .	<i>100,977</i>	<i>79,409</i>	<i>4,939</i>	<i>185,325</i>	<i>18,634</i>	<i>17,155</i>	<i>1,505</i>	<i>37,294</i>

*State or Territory of intended residence (arrivals) or last residence (departures).* The following table shows the number of settlers arriving in Australia by State or Territory of intended residence and the number of Australian residents departing permanently by State or Territory of last residence, for the years 1968 to 1970. Settlers are asked, on or before arrival, the State or Territory of Australia in which they next intend to stay for twelve months or more. The statements represent the settlers' intentions at the time and these may not be realised. The allocation to States and Territories in the table is based on these statements, except that settlers proceeding to the migrant reception centre, Bonegilla, Victoria, are allocated, as far as is practicable, to the State or Territory of their placement from the centre. Residents departing permanently are asked the State or Territory in which they last stayed for twelve months or more.

OVERSEAS ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT  
SETTLERS ARRIVING AND RESIDENTS DEPARTING, BY STATE OR TERRITORY OF  
INTENDED RESIDENCE (ARRIVALS) OR LAST RESIDENCE (DEPARTURES), 1968 TO 1970  
(Persons)

<i>State or Territory of intended residence (arrivals) or last residence (departures)</i>	<i>Settlers arriving</i>			<i>Residents departing</i>		
	<i>1968</i>	<i>1969</i>	<i>1970</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
New South Wales . . . . .	56,771	70,147	72,563	9,716	10,551	12,379
Victoria . . . . .	42,680	50,063	49,013	7,340	7,487	8,026
Queensland . . . . .	10,222	12,188	11,467	2,974	3,190	3,554
South Australia . . . . .	14,358	16,589	17,256	3,895	3,703	3,583
Western Australia . . . . .	23,538	22,897	23,082	3,366	4,100	4,251
Tasmania . . . . .	2,315	2,036	1,979	473	609	613
Northern Territory . . . . .	392	384	521	177	195	265
Australian Capital Territory . . . . .	1,224	1,388	1,542	476	490	517
Not stated(a) . . . . .	7,770	7,724	7,902	3,258	3,306	4,106
<i>Total</i> . . . . .	<i>159,270</i>	<i>183,416</i>	<i>185,325</i>	<i>31,675</i>	<i>33,631</i>	<i>37,294</i>

(a) Includes settlers passing through the migrant reception centre who were not placed in time for allocation to States.



*Former settlers and other residents departing permanently—country of intended residence.* The principal countries of intended residence of persons departing permanently during the years 1969 and 1970 are shown in the following table for 'former settlers' departing permanently (*see definition on page 140*) and other residents departing permanently.

**OVERSEAS DEPARTURES—PERMANENT MOVEMENT**  
**COUNTRY OF INTENDED RESIDENCE(a)**  
**AUSTRALIA, 1969 AND 1970**

<i>Country of intended residence(a)</i>	1969			1970		
	<i>Former settlers</i>	<i>Other residents</i>	<i>Total</i>	<i>Former settlers</i>	<i>Other residents</i>	<i>Total</i>
Canada . . . . .	839	779	1,618	898	808	1,706
New Zealand . . . . .	2,440	1,840	4,280	3,418	2,546	5,964
Papua and New Guinea . . . . .	225	1,430	1,655	311	1,653	1,964
United Kingdom and Ireland . . . . .	14,124	1,790	15,914	14,310	2,086	16,396
Other Commonwealth countries . . . . .	960	738	1,698	948	800	1,748
<i>Total, Commonwealth countries</i>	<i>18,588</i>	<i>6,577</i>	<i>25,165</i>	<i>19,885</i>	<i>7,893</i>	<i>27,778</i>
Germany . . . . .	823	195	1,018	872	214	1,086
Italy . . . . .	655	152	807	701	182	883
Netherlands . . . . .	569	203	772	950	283	1,233
Other European countries . . . . .	1,772	373	2,145	2,017	458	2,475
United States of America . . . . .	1,445	930	2,375	1,455	992	2,447
Other countries . . . . .	887	462	1,349	876	516	1,392
<i>Total, foreign countries</i>	<i>6,151</i>	<i>2,315</i>	<i>8,466</i>	<i>6,871</i>	<i>2,645</i>	<i>9,516</i>
<b>Grand total . . . . .</b>	<b>24,739</b>	<b>8,892</b>	<b>33,631</b>	<b>26,756</b>	<b>10,538</b>	<b>37,294</b>

(a) For a period of twelve months or more.

### Assisted migration into Australia

Detailed statistics of assisted migration into Australia are shown in *Australian Immigration: Consolidated Statistics* and *Australian Immigration: Quarterly Statistical Summary* published by the Department of Immigration.

Immigration has been a major factor in Australia's economic growth. Since the 1939–45 War immigration programmes have been pursued as a central feature of government policies for national development. Since 1945 successive Australian governments have borne a substantial part of the passage costs of selected migrants from overseas countries. The following table shows the numbers of persons who were assisted to come to Australia by the Australian Government under all assisted passage schemes during the period 1946 to 1970.

### ASSISTED MIGRATION: AUSTRALIA, 1946 TO 1970

<i>Period</i>	<i>Nominated and selected (assisted) arrivals</i>
1946–50 . . . . .	273,195
1951–55 . . . . .	275,241
1956–60 . . . . .	305,517
1961–65 . . . . .	337,132
1966–70 . . . . .	537,478
1964 . . . . .	79,604
1965 . . . . .	93,653
1966 . . . . .	89,743
1967 . . . . .	82,247
1968 . . . . .	105,102
1969 . . . . .	125,958
1970 . . . . .	134,428

Details of the joint scheme of assisted immigration arrived at by agreement between the Commonwealth and State Governments, which operated from 1920 to 1939, were published in earlier issues of the Year Book (*see* No. 38, page 576). After the outbreak of hostilities in 1939 it was decided to discontinue the grant of assisted passages for the duration of the war.

### Migration from Britain

At the conclusion of the 1939-45 War two migration agreements were negotiated between the Australian and British Governments and came into operation on 31 March 1947. One of these provided for the grant of free passages to British ex-servicemen and their dependants and was terminated on 28 February 1955. The other migration agreement to provide assisted passages has continued in operation by renewal from time to time. It is now valid until 31 May 1972.

*Assisted passages.* The British Government now contributes £Stg150,000 per annum towards the cost of the movement of migrants to Australia. Each migrant 19 years of age or over contributes £Stg10 towards his passage costs. Migrants under 19 years of age make no contribution. The Australian Government meets the balance of the transport costs.

Eligibility for consideration for assisted passages is confined generally to citizens of the United Kingdom and Colonies, normally resident in Britain.

Hostels are operated by the Australian Government and also by the State Governments to provide transit or temporary accommodation for certain groups of newly arrived migrants.

*Number of arrivals.* The numbers of British migrants who came to Australia under the United Kingdom Assisted Passage Agreement during the period January 1947 to June 1970 are given in the following table according to the State or Territory of intended residence.

UNITED KINGDOM ASSISTED PASSAGE AGREEMENT: NUMBER OF MIGRANTS<sup>(a)</sup>  
STATES AND TERRITORIES OF INTENDED RESIDENCE  
JANUARY 1947 TO JUNE 1970

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T. and N.T.</i>	<i>Cwlth</i>
January 1947 to June 1962 . . .	138,009	131,245	49,039	52,642	38,880	12,736	5,387	427,938
1962-63 . . .	12,581	10,261	3,687	7,764	6,431	676	300	41,700
1963-64 . . .	15,199	14,170	5,396	12,762	5,780	912	411	54,630
1964-65 . . .	23,759	16,986	6,385	15,676	6,336	1,161	385	70,688
1965-66 . . .	21,546	14,862	5,671	17,065	9,965	1,183	462	70,754
1966-67 . . .	20,586	14,995	5,538	13,768	13,965	1,234	484	70,570
1967-68 . . .	16,297	11,929	4,639	8,384	13,034	1,196	398	55,877
1968-69 . . .	23,754	14,705	5,954	12,046	14,990	1,536	399	73,384
1969-70 . . .	22,583	13,448	5,843	11,515	13,955	1,268	423	69,035
Total January 1947 to June 1970 . .	294,314	242,601	92,152	151,622	123,336	21,902	8,649	934,576

(a) Includes child migrants.

### Maltese migration

A scheme of assisted migration entered into by the Australian and Maltese Governments in 1948 has been renewed from time to time and the current agreement was signed on 14 December 1970. The present scheme provides for selected persons aged 19 years and over to contribute \$A25 towards passage costs. Migrants under 19 years of age make no contribution.

The Australian Government meets the balance of the transport costs.

### Foreign migration

Australia has migration agreements and arrangements with Austria, Belgium, Germany, Greece, Italy, Netherlands, Spain, Turkey and recently with Yugoslavia whereby selected persons aged 19 years and over may migrate to Australia for a personal contribution of \$A25 towards passage costs, with no contribution required from those under 19 years. Assisted passage schemes for refugees are operated in several of these countries. Details of schemes may be found in Year Book No. 55, pages 148-9.

The Special Passage Assistance Programme is a unilateral scheme which provides financial assistance of up to \$A335 for persons 19 years and over and up to \$A360 for those under 19 years. It applies to selected Europeans ineligible under other schemes who are resident in Britain, Ireland, Western Europe, and also certain countries in Central and South America, Africa and Asia.

A scheme similar to the Special Passage Assistance Programme applies to the United States of America.

### The Intergovernmental Committee for European Migration (ICEM)

This Committee was established in 1951 to perform functions that had formerly been carried out by the International Refugee Organization. In addition to assuming responsibility for the resettlement of refugees, ICEM is concerned with the movements of national migrants from Europe. Australia was one of the sixteen foundation members of the Committee; there are now thirty-one member countries.

The three main functions of ICEM are the movement of national migrants and refugees, the provision of related services and developmental activities and technical co-operation.

Up to 31 December 1970 ICEM had moved 1,775,450 persons, of whom 584,787 (400,868 nationals and 183,919 refugees) had departed for Australia.

### Summary of arrivals of assisted migrants

The following table shows the number of assisted migrants who arrived in Australia in each of the last five financial years and since January 1947. All arrivals included in this table have obtained some financial assistance from the Australian Government towards payment of their passage money. Transport to Australia for the migrants concerned has been arranged on ships and aircraft under charter to the Department of Immigration, ships and aircraft under charter to the Intergovernmental Committee for European Migration, and normal commercial shipping and airlines. The arrivals under these schemes include a small number of nationals of countries other than those referred to, and stateless persons.

#### ARRIVALS UNDER ASSISTED MIGRATION SCHEMES: AUSTRALIA, JANUARY 1947 TO JUNE 1970

<i>Assisted migration scheme</i>	<i>January 1947 to June 1965</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>January 1947 to June 1970</i>
Austrian . . . . .	18,485	824	556	466	419	555	21,305
Belgian . . . . .	1,625	201	236	249	262	201	2,774
General Assisted Passage(a)	27,120	4,924	2,584	2,101	2,467	1,192	40,388
German . . . . .	75,671	3,266	2,932	3,204	2,449	3,148	90,670
Greek . . . . .	39,748	2,673	2,888	4,188	6,189	6,249	61,935
Italian . . . . .	41,028	281	287	1,381	4,686	5,257	52,920
Maltese . . . . .	35,264	2,368	754	910	755	641	40,692
Netherlands . . . . .	68,785	1,652	1,383	1,781	2,406	2,304	78,311
Refugee . . . . .	211,265	2,177	1,805	3,226	7,613	16,495	242,581
Spanish . . . . .	8,007	70	91	82	878	1,130	10,258
Special Passage Assistance Programme(b)	..	..	4,638	11,170	14,508	20,437	50,753
Turkish . . . . .	..	..	..	..	2,014	3,542	5,556
United Kingdom . . . . .	594,956	70,754	70,570	55,877	73,384	69,035	934,576
Other schemes . . . . .	28,098	..	..	..	439	1,682	30,219
<b>Total . . . . .</b>	<b>1,150,052</b>	<b>89,190</b>	<b>88,724</b>	<b>84,635</b>	<b>118,469</b>	<b>131,868</b>	<b>1,662,938</b>

(a) Mostly Scandinavians, U.S. Americans, and British nationals from countries other than the United Kingdom.  
(b) Includes United States Passage Assistance Programme (U.S.P.A.P.).

### Immigration Advisory, Planning and Publicity Councils

Three bodies have been established to advise the Minister for Immigration on the social, economic and publicity aspects of the immigration programme.



The *Immigration Advisory Council*, established in 1947, consists of representatives of certain national organisations (e.g. the Australian Council of Trade Unions, the Returned Servicemen's League of Australia, and the National Youth Council) and advises the Minister on aspects of the integration of migrants. The *Immigration Planning Council*, established in 1949, consists of eminent persons chosen in their own right; it advises the Minister on the economic considerations affecting the immigration programme, size, and distribution of future population and urban environmental development. The *Immigration Publicity Council*, established in 1962, advises on publicity and publications used in Australia and overseas. Its members represent the press (including the foreign language newspapers), radio, advertising and television interests.

### Professional migration

The Department of Immigration, working in co-operation with the Department of Labour and National Service, provides a special service, including advisory staff in London, to encourage immigration of professionally qualified persons by giving advice and information on prospects in Australia and by putting such applicants in touch with Australian employers.

On 27 March 1969, the Minister for Immigration announced the establishment of a Committee on Overseas Professional Qualifications, which has the task of collating information about, and evaluating the comparability of overseas with Australian professional qualifications.

## The regulation of immigration into Australia

### Powers and legislation of the Commonwealth

Under section 51 (xix), (xxvii) and (xxviii) of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws with respect to immigration, emigration, aliens and the influx of criminals. Immigration into Australia is regulated by the *Migration Act* 1958-1966 which came into force on 1 June 1959.

Any immigrant entering Australia after the commencement of the Act without having been granted an 'entry permit' or who is not within an exempted class is a prohibited immigrant. Exempted persons include diplomatic, consular and trade representatives of other countries, and seamen who enter with leave while their ships are in Australian ports. For the purposes of the Migration Act an immigrant includes a person entering for temporary stay.

An entry permit is normally granted at the port of entry by means of a stamp in the traveller's passport or equivalent travel document. No form of application is involved. Temporary permits are granted to visitors and persons whose stay is to be of limited duration. For other persons permits are issued without limitation as to stay. A person who is refused an entry permit must not be permitted (by the carrier company) to enter Australia; otherwise the carrier company is liable to a fine of \$1,000.

The Act contains provision for the deportation of persons who enter Australia without an entry permit, who overstay their approved period of residence or who are convicted of crimes. It also contains provisions relating to the emigration of children and Aborigines.

The Act does *not* affect passport or visa requirements for travel to Australia.

The *Aliens Act* 1947-1966 provides that a register of aliens shall be maintained for every State and mainland Territory of Australia. Unless exempted, aliens 16 years of age and over are required to register with the Department of Immigration and to notify that Department of their address, occupation, or employment during the month of September each year. They are required to notify marriage within thirty days of marriage taking place. The Act provides also that the consent of the Department must be obtained before an alien may change his surname.

The *Immigration (Guardianship of Children) Act* 1946-1966 provides that the Minister for Immigration becomes the legal guardian of every person under the age of 21 years who enters Australia (except for certain exempted groups) other than in the charge of, or for the purpose of living in the care of, a parent or adult relative. It is primarily administered through the child welfare authorities in each State and mainland Territory who, as the Minister's delegates under the Act, supervise the welfare of each 'immigrant child'.

### Conditions of immigration into Australia

Australia's immigration policy is directed towards the maintenance of a socially cohesive and homogeneous nation. It seeks to avoid the creation of permanent minority groups resistant to integration even through successive generations. The policy does not exclude persons of any ethnic origin; but it does exercise prudent caution in the matter of accepting large numbers of people with substantially different backgrounds, characteristics and customs who may resist general integration even in the long term.

*Admission of persons of European descent.* Aliens of European descent, citizens of Malta, Cyprus and Mauritius and residents of the Seychelle Islands desiring to settle permanently in Australia are required to obtain authority for admission from the Department of Immigration or an Australian overseas post. Their admission under the present policy is subject to clearance on health, character, and security grounds, and depends on their suitability as settlers generally.

*Non-Europeans.* The present policy permits the Minister to authorise the entry of non-Europeans taking into account their qualifications, their ability to integrate readily into the community and other aspects including considerations of a humanitarian nature and broad national interest. It provides *inter alia* that non-Europeans may be admitted:

- (i) who are the spouses, unmarried minor children, aged parents or fiancé(e)s of Australian residents or of persons who have authority to enter or remain in Australia for residence; or
- (ii) on the basis of their general suitability, their ability to integrate readily and their having qualifications which are in demand and positively useful to Australia. Examples of those who may qualify for entry in this way are:
  - persons with specialised technical skills for appointments for which local residents are not available;
  - persons of high attainment in the arts and sciences, or of prominent achievement in other ways;
  - persons eligible to practise in a profession in Australia in which they may be absorbed without difficulty;
  - executives, technicians, and other specialists who have spent substantial periods in Australia—for example, with the branches here of large Asian companies—and who have qualifications or experience in positive demand here;
  - businessmen who in their own countries have been engaged in substantial international trading and would be able to carry on such trade from Australia;
  - persons who have been of particular and lasting help to Australia's interest abroad in trade or in other ways;
  - persons who by former residence in Australia or by association with Australia have demonstrated an interest in or identification with Australia that should make their future residence here feasible.

*Persons of mixed descent.* Persons of part European/part non-European descent may be admitted for residence where:

- (i) the applicant is suffering hardship through specific discrimination in his own country; or
- (ii) he has special skills or qualifications; or
- (iii) he has immediate family members resident in Australia. Immediate family relatives are defined as spouse, parent, child, brother or sister.

*Private students.* Young people may enter Australia for the purpose of study, irrespective of their countries of origin. The greater proportion of such private students in Australia are from Asia, the Pacific area and, to a lesser extent, from the continent of Africa (there are at present about 10,000 private students in Australia). The objective is to provide the opportunity for young people in these areas to come to Australia for advanced secondary, tertiary and other post-secondary study and training which will result in qualifications in demand and of use in their countries. The student, as well as meeting other requirements of entry, must have the capacity to undertake the course of study proposed and produce evidence of enrolment and assurances as to maintenance and accommodation. The student is admitted with temporary resident status and is required to acknowledge that he is obliged to return home on completing the approved course of study or training and that authority for stay and for extensions of stay as a student is dependent upon satisfactory academic progress.

In addition to visitors and students, provision exists also for the entry on a limited temporary residence basis of staffs of companies, professional, technical and specialist personnel, and of persons coming for medical treatment, religious training, or as sportsmen and entertainers, and in other miscellaneous categories.

## Passports

Australian passports are issued under the *Passports Act 1938-1966* and *Passport Regulations*. Passports are obtainable on application at offices of the Commonwealth Department of Immigration in each State, the Northern Territory, and the Australian Capital Territory, from overseas offices of that Department, from any Australian diplomatic or consular mission abroad, or from the office of any Australian Government Trade Commissioner overseas. Applicants for passports must furnish evidence of their identity and nationality and pay a fee of four dollars. Approximately 160,000 Australian passports are issued each year in Australia and abroad.

## Citizenship and naturalisation

### Commonwealth legislation

The *Nationality and Citizenship Act 1948* which came into force on 26 January 1949 created the status of 'Australian citizenship', declared Australian citizens to be British subjects and recognised as British subjects the citizens of other Commonwealth countries. Australian citizenship was acquired automatically by persons who were British subjects on 26 January 1949 and who (a) were born in Australia or New Guinea, (b) were naturalised in Australia, (c) had been ordinarily resident in Australia or New Guinea for the five years immediately prior to that date, (d) were the wives of persons who became Australian citizens on that date and had entered Australia with resident status prior to 26 January 1949, or (e) were the children born abroad of persons referred to in (a) or (b) and who entered Australia without being placed under immigration restriction.

For the purposes of the Act 'Australia' includes the Territories of the Commonwealth that are not Trust Territories.

Australian citizenship may be acquired (a) by birth in Australia, (b) by birth abroad subject to registration of the birth at an Australian Consulate, (c) by naturalisation in the case of aliens or protected persons, (d) by registration in the case of citizens of other Commonwealth countries and Irish citizens and, (e) by notification in the case of British subjects who have lived in Australia for five years, have resident status and are not liable to deportation. Generally, aliens are required to spend five years residence in Australia but those who can read and write English proficiently may be naturalised after three years. Citizenship may be granted earlier to persons who are the spouses of Australian citizens, persons who have lived in other Commonwealth countries, persons who have served in the Commonwealth Armed Forces, and persons who were formerly Australian citizens or are minors.

The Act recognises the independence of married women. Australian citizenship is not lost solely by marriage to an alien nor do alien women acquire Australian citizenship upon marriage to an Australian citizen. Alien wives of Australian citizens may be naturalised under easier conditions than those which apply to other aliens.

On 4 June 1969 the Act became the *Citizenship Act 1948-1969*.

### Persons granted Australian citizenship by naturalisation and registration during 1969-70

#### PERSONS GRANTED AUSTRALIAN CITIZENSHIP BY NATURALISATION, 1969-70

##### PREVIOUS NATIONALITY

Albanian . . . . .	7	Estonian . . . . .	23	Latvian . . . . .	87	Turkish . . . . .	59
Argentinian . . . . .	29	Filipino . . . . .	79	Lebanese . . . . .	500	Ukrainian . . . . .	139
Australian pro- tected person . . . . .	90	Finnish . . . . .	241	Lithuanian . . . . .	63	United Arab Republic . . . . .	815
Austrian . . . . .	433	French . . . . .	208	Mexican . . . . .	4	United States	
Belgian . . . . .	92	German . . . . .	1,757	Norwegian . . . . .	48	American . . . . .	166
Brazilian . . . . .	7	Greek . . . . .	5,960	Polish . . . . .	1,159	Venezuelan . . . . .	5
British protected person . . . . .	3	Hungarian . . . . .	554	Portuguese . . . . .	106	Vietnamese . . . . .	11
Bulgarian . . . . .	21	Indonesian . . . . .	20	Romanian . . . . .	72	Yugoslav . . . . .	3,346
Burmese . . . . .	135	Iranian . . . . .	45	Russian . . . . .	310	Other . . . . .	59
Chinese . . . . .	598	Iraqi . . . . .	83	Spanish . . . . .	429		
Czechoslovak . . . . .	123	Israeli . . . . .	163	Stateless . . . . .	408		
Danish . . . . .	100	Italian . . . . .	5,764	Swedish . . . . .	37	Total . . . . .	26,845
Dutch . . . . .	2,084	Japanese . . . . .	32	Swiss . . . . .	155		
		Jordanian . . . . .	151	Syrian . . . . .	48		
		Korean . . . . .	3	Thai . . . . .	14		

The numbers of persons affected by certificates of naturalisation granted in 1969-70 by State or Territory of residence were as follows: New South Wales, 8,954; Victoria, 10,766; Queensland, 1,459; South Australia, 2,366; Western Australia, 1,930; Tasmania, 387; Northern Territory, 231; Australian Capital Territory, 560; New Guinea, 192; Total, 26,845.



**PERSONS GRANTED AUSTRALIAN CITIZENSHIP BY REGISTRATION, 1969-70**  
**NATIONALITY**

Citizens of—	Citizens of—	Citizens of—	Citizens of—
Canada . . . 39	Jamaica . . . 1	South Africa . . . 275	British—
Ceylon . . . 550	Kenya . . . 2	Trinidad and	country of
Cyprus . . . 315	Malaysia . . . 328	Tobago . . . 15	citizenship
Fiji . . . 5	Malta . . . 284	United King-	other or not
Ghana . . . 1	New Zealand . . . 132	dom and	stated . . . 189
Guyana . . . 1	Pakistan . . . 53	Colonies . . . 4,476	
India . . . 1,357	Rhodesia . . . 50		<b>Total . . . 8,315</b>
Ireland . . . 138	Singapore . . . 104		

**PERSONS GRANTED AUSTRALIAN CITIZENSHIP BY NATURALISATION**  
**JANUARY 1945 TO JUNE 1970**

Previous nationality	Previous nationality	Previous nationality	Previous nationality
Albanian . . . 1,153	German . . . 49,353	Polish . . . 68,762	United Arab
Austrian . . . 10,005	Greek . . . 64,936	Portuguese . . . 693	Republic . . . 1,963
Belgian . . . 943	Hungarian . . . 31,240	Romanian . . . 3,150	United States
Bulgarian . . . 1,343	Indonesian . . . 258	Russian . . . 11,349	American . . . 1,642
Chinese . . . 7,149	Israeli . . . 4,449	Spanish . . . 2,244	Yugoslav . . . 48,297
Czechoslovak . . . 11,611	Italian . . . 148,015	Stateless . . . 15,821	Others . . . 4,545
Danish . . . 2,589	Japanese . . . 749	Swedish . . . 773	
Dutch . . . 73,838	Latvian . . . 18,159	Swiss . . . 2,129	<b>Total . . . 635,555</b>
Estonian . . . 6,093	Lebanese . . . 5,852	Syrian . . . 239	
Finnish . . . 2,961	Lithuanian . . . 8,715	Turkish . . . 412	
French . . . 2,576	Norwegian . . . 1,317	Ukrainian . . . 20,232	

More detailed statistics of persons granted Australian citizenship are shown in *Australian Immigration: Consolidated Statistics* published by the Department of Immigration.

### **Migrant integration**

Integration services operate to aid the social settlement of migrants into the Australian community. In addition to direct welfare work the programme includes the following activities.

Migrant education services are available to help migrants overcome language problems and settle effectively into the Australian community. For adults instruction is provided in source countries prior to embarkation, on board ship and after arrival in Australia. Special classes are also provided for migrant children to help them adapt to the normal school system. At 31 December 1970, 23,275 migrants were receiving instruction under the adult programme and 12,149 children were receiving special tuition.

A team of psychologists undertakes surveys and other research into migrant integration and welfare in Australia and migrant selection overseas.

The Good Neighbour Movement operates as a voluntary and direct service organisation throughout Australia to assist in the integration of migrants. Membership of the movement is made up of hundreds of community organisations whose activities are co-ordinated by State Councils. The Commonwealth Government assists each Council financially through grants to cover administrative expenses. These grants provide also for the employment of some 70 office, field office and social worker staff deployed in 8 Council central offices and in another 8 regional offices. In the cities and towns of Australia there are 90 branches and 651 representatives of the Movement.

Transitory accommodation is provided for Commonwealth nominated assisted migrants. The main types of accommodation used are hostels (present capacity 19,000) and furnished flats (present capacity 1,742). Migrant families may stay up to twelve months in a hostel and up to six months in a flat. Operating costs of hostels, and flat rentals, are subsidised by the Government. Accommodation

for unaccompanied single girls is provided in private hostels operated by the Y.W.C.A., Salvation Army and Traveller's Aid Society of Victoria. Special reception facilities are provided for non-British migrants at the Bonegilla Migrant Centre, Victoria. A subsidy towards the cost of accommodation in private establishments is available to migrants wishing to settle in country areas where there are no hostels or flats.

*Citizenship Conventions.* Citizenship Conventions are convened in Canberra at two-yearly intervals by the Commonwealth Government. Delegates from a wide range of community organisations and from Commonwealth and State Governments participate. The subjects discussed relate to the integration of migrants, Australian citizenship and the role of immigration in Australia's development.

### Population of External Territories

Ordinances of the individual External Territories under the control of Australia provide for a census of the population to be taken on the day prescribed for the taking of a census in the Commonwealth of Australia. The following table shows the population of the Territories of Christmas Island, Cocos (Keeling) Islands, Norfolk Island, Papua and the Trust Territory of New Guinea at the census of 30 June 1966 and as estimated at 30 June 1970.

POPULATION: EXTERNAL TERRITORIES, 30 JUNE 1966 AND 1970

Territory	Census 30 June 1966			Estimate 30 June 1970
	Males	Females	Persons	Persons
Christmas Island . .	2,154	1,232	3,386	3,361
Cocos (Keeling) Islands . .	375	309	684	611
Norfolk Island . .	563	584	1,147	1,240
Papua—				
Indigenous population . .	(a)310,153	(a)281,806	(a)591,959	668,964
Non-indigenous population . . . .	8,307	6,070	14,377	n.a.
Total, Papua . .	318,460	287,876	606,336	(b)n.a.
Trust Territory of New Guinea—				
Indigenous population . .	(a)810,154	(a)748,209	(a)1,558,363	1,772,744
Non-indigenous population . . . .	11,744	8,547	20,291	n.a.
Total, New Guinea . .	821,898	756,756	1,578,654	(b)n.a.

(a) The 1966 Census of Papua and New Guinea was the first to include the indigenous population, and was based upon a 10 per cent sample of rural villages in the two Territories.  
(b) The total population for Papua and New Guinea was 2,490,668 at 30 June 1970.

Further particulars concerning the indigenous populations of the Territories are given in the chapter The Territories of Australia.

### International statistics of population

In the following tables the population, density, rate of growth, natural increase and masculinity are shown in respect of all countries which had an estimated population of at least five million persons in 1969, excepting for the group 'Oceania', which is treated in more detail. The source of these figures is the 1969 *Demographic Yearbook*, which is prepared and published by the Statistical Office of the United Nations. The tables include figures varying in reliability and accuracy, there being considerable variation in the quality of demographic statistics between countries, but this information has been shown to provide a guide as to the magnitude and trend of population movements in overseas countries.

Where the information available to the Statistical Office of the United Nations relates to only part of the population of a country, the population characteristic (e.g. rate of growth), or vital statistics rate (e.g. marriages), has been omitted from the tables, and this is indicated by a footnote.

For fuller particulars of the differences in the quality of the statistics and their reliability and for other qualifications, reference should be made to the detailed explanations contained in the *Demographic Yearbook* of the Statistical Office of the United Nations (see particularly Technical Notes on Statistical Tables and footnotes to the tables).

### Population, rate of growth and density: world, continents and regions

In preparing the population figures shown below the Population Branch of the United Nations includes revisions made to the estimates from time to time as new data become available, for example, from a census. Adjustments for under-enumeration have also been made. Reference should be made to the description contained in the United Nations *Demographic Yearbook*, 1969 (pages 16-17), regarding the scheme of regionalisation.

### POPULATION, DENSITY AND RATE OF INCREASE FOR THE WORLD AND CONTINENTS—SELECTED YEARS

(Source: United Nations *Demographic Yearbook*, 1969)

Continent and region	Population							Annual rate of increase 1963-69 (per cent)	Average annual increase 1963-69 (millions)	Density (persons per square mile) 1969
	Estimates of mid-year population (millions)									
	1930	1940	1950	1960	1963	1969				
World total	2,070	2,295	2,517	3,005	3,176	3,552	1.9	62.7	67	
Africa	164	191	222	278	297	345	2.5	8.0	28	
Western Africa	48	58	67	88	94	109	2.4	2.5	47	
Eastern Africa	46	54	63	77	82	96	2.5	2.3	39	
Northern Africa	39	44	53	66	71	83	2.7	2.0	26	
Middle Africa	21	23	25	29	31	35	2.0	0.7	13	
Southern Africa	10	12	14	18	19	22	2.4	0.5	21	
America	242	274	329	412	440	500	2.1	10.0	31	
Northern America	134	144	166	199	208	224	1.2	2.7	26	
Latin America	108	130	163	213	232	276	2.9	7.3	34	
Tropical South America	55	67	84	112	122	147	3.1	4.2	28	
Middle America	22	27	35	48	53	65	3.4	2.0	67	
Temperate South America	19	22	27	33	35	39	1.8	0.7	23	
Caribbean	12	14	17	20	22	25	2.3	0.5	272	
Asia(a)	1,120	1,244	1,381	1,660	1,760	1,988	2.1	38.0	186	
East Asia	591	634	684	794	827	901	1.5	12.3	199	
Mainland Region	501	533	563	654	680	740	1.4	10.0	174	
Japan	64	71	83	93	96	102	1.1	1.0	717	
Other East Asia	26	30	38	47	51	59	2.6	1.3	596	
South Asia	529	610	697	866	933	1,087	2.6	25.7	179	
Middle South Asia	371	422	479	588	634	736	2.5	17.0	282	
South East Asia	127	150	173	219	236	278	2.7	7.0	161	
South West Asia	31	38	45	59	63	73	2.4	1.7	41	
Europe(a)	355	380	392	425	437	460	0.8	3.8	241	
Western Europe	108	113	123	135	140	148	0.9	1.3	386	
Southern Europe	93	103	108	117	120	128	1.1	1.3	254	
Eastern Europe	89	96	88	97	99	103	0.7	0.7	269	
Northern Europe	65	68	73	76	78	81	0.7	0.5	127	
Oceania	10.0	11.1	12.7	15.8	16.8	18.9	2.0	0.3	5	
Australia and New Zealand	8.0	8.7	10.1	12.7	13.5	15.1	1.9	0.3	5	
Melanesia	1.6	1.8	1.9	2.2	2.4	2.7	2.3	0.0	13	
Polynesia and Micronesia	0.4	0.6	0.7	0.9	0.9	1.1	2.9	0.0	98	
Union of Soviet Socialist Republics	179	195	180	214	225	240	1.1	2.5	28	

(a) Excludes U.S.S.R. shown below.

### Population, density, rate of growth, natural increase, and masculinity of selected countries

Certain details of the population of the more populous countries within continental groups are shown in the following table. As explained above, reference should be made to the detailed comments contained in the United Nations *Demographic Yearbook*, 1969, regarding geographical units used, boundaries of areas, reliability of estimates, etc.



## POPULATION, DENSITY, RATE OF INCREASE, NATURAL INCREASE AND MASCULINITY—SELECTED COUNTRIES

(Source: United Nations *Demographic Yearbook*, 1969)

Country	Population mid-year 1969 (thousands)	Density (persons per square mile)	Annual rate of increase 1963-69 (per cent)	Natural increase		Masculinity at latest census	
				Year	Rate (per thousand popula- tion)	Year	Rate (number of males per 100 females)
Africa—							
Nigeria . . . . .	63,870	179	2.4	..	(a)	1963	102.0
United Arab Republic, Egypt . . . . .	32,501	83	2.5	1969	22.4	1966	101.8
Ethiopia . . . . .	24,769	52	2.1	1963	20.9	..	(a)
South Africa . . . . .	19,618	41	2.4	..	(a)	1960	101.1
Congo, Democratic Republic of . . . . .	17,100	18	2.2	1955-57	23	1958	94.4
Sudan . . . . .	15,186	16	2.8	1956	33.2	1956	102.2
Morocco . . . . .	15,050	88	2.9	1962	27.4	1960	99.9
Algeria . . . . .	13,349	16	3.0	1968	30.5	1966	100.8
Tanzania—							
Tanganyika . . . . .	12,557	34	2.6	1957	21-22	1967	95.1
Zanzibar . . . . .	369	363	1.9	1958	9	1967	102.3
Kenya . . . . .	10,506	47	2.9	1962	30	1962	98.1
North America—							
United States of America . . . . .	203,216	57	1.2	1969	8.2	1960	97.1
Mexico . . . . .	48,933	65	3.5	1960-65	34	1970	97.7
Canada . . . . .	21,089	5	1.8	1969	10.3	1966	100.9
South America—							
Brazil . . . . .	90,840	28	3.0	1960-65	31	1960	99.7
Argentina . . . . .	23,983	23	1.5	1960-65	14	1960	100.6
Columbia . . . . .	20,463	47	3.2	1960-65	29-30	1964	97.1
Peru . . . . .	13,172	26	3.1	1960-65	31-32	1961	98.9
Venezuela . . . . .	10,035	28	3.5	1960-65	37-38	1961	103.3
Asia—							
China (mainland) . . . . .	740,000	199	1.4	1957	23	1953	107.6
India . . . . .	536,984	425	2.5	1951-61	18.9	1961	106.2
Indonesia . . . . .	116,000	202	2.5	1962	21.6	1961	97.3
Pakistan . . . . .	111,830	306	2.1	1965	31	1961	111.1
Japan . . . . .	102,321	717	1.1	1969	11.6	1965	96.4
Philippines . . . . .	37,158	321	3.5	1968	18.1	1960	101.8
Thailand . . . . .	34,738	176	3.1	1964	33.1	1960	100.4
Turkey in Asia . . . . .	31,408	106	2.5	1966	27	..	(a)
Korea, Republic of . . . . .	31,139	818	2.5	1955-60	28.7	1966	101.3
Iran . . . . .	27,892	44	3.0	..	(a)	1966	107.0
Burma . . . . .	26,980	104	2.2	1955	15	1941	104.0
Vietnam (North) . . . . .	21,340	347	3.1	..	(a)	1960	93.4
Vietnam, Republic of . . . . .	17,867	267	2.6	1960	17	..	(a)
Afghanistan . . . . .	16,516	67	2.1	..	(a)	..	(a)
China, Republic of (Taiwan) . . . . .	13,800	995	2.8	1969	20.0	1966	112.1
Korea (North) . . . . .	13,300	285	2.5	1962	30.3	..	(a)
Ceylon . . . . .	12,240	484	2.4	1968	23.9	1963	108.2
Nepal . . . . .	10,845	199	1.8	1961	20.3	1961	96.9
West Malaysia (Malaya) . . . . .	9,000	179	2.8	1967	27.8	1957	106.5
Cambodia . . . . .	6,701	96	2.2	..	(a)	1962	100.7
Europe—							
Germany—							
Federal Republic of . . . . .	58,707	614	1.0	1969	2.6	1961	89.4
Eastern . . . . .	16,010	386	-0.1	1968	0.0	1964	84.1
West Berlin . . . . .	2,135	11,497	-0.3	1968	-8.5	1961	73.2
East Berlin . . . . .	1,086	6,980	0.4	1967	-1.0	1964	77.8
United Kingdom . . . . .	55,534	591	0.6	1968	5.2	1961	93.6
Italy . . . . .	53,170	458	0.8	1969	7.5	1961	94.0
France . . . . .	50,320	238	0.9	1968	5.8	1962	94.6
Spain . . . . .	32,949	168	1.0	1969	10.9	1960	94.2
Poland . . . . .	32,555	269	1.0	1969	8.2	1960	93.7
Yugoslavia . . . . .	20,351	207	1.1	1969	9.6	1961	95.1
Romania . . . . .	20,010	218	1.0	1969	13.2	1966	95.9
Czechoslovakia . . . . .	14,418	293	0.5	1969	4.3	1961	95.2
Netherlands . . . . .	12,873	816	1.2	1969	10.9	1960	99.2
Hungary . . . . .	10,295	287	0.3	1969	3.7	1960	93.2
Greece . . . . .	8,835	174	0.7	1968	9.9	1961	95.2
Oceania—							
Australia . . . . .	12,296	4	2.0	1968	10.9	1966	101.4
New Zealand . . . . .	2,777	26	1.6	1969	13.8	1966	100.8
New Guinea (Trust Territory) . . . . .	1,695	18	(a)	..	(a)	1966	108.9
Papua . . . . .	620	8	(a)	..	(a)	1966	111.3
U.S.S.R.—							
Union of Soviet Socialist Republics . . . . .	240,571	28	1.1	1968	9.5	1970	85.3

(a) Not available or information relates to a segment of a population only.

## CHAPTER 8

### VITAL STATISTICS

The tables in this chapter are confined to the principal characteristics of vital statistics for Australia and relate, in the main, to the year 1970 for marriages and 1969 for births, deaths, and infant deaths. Comparisons have been restricted, in general, to the individual years 1966 to 1970 and the five-year periods 1946–50 to 1966–70, while age data have been shown in five-year groups. Comparisons over longer periods, together with more detailed figures such as single age particulars and cross-classifications of various characteristics, are published in the annual bulletins, *Demography* and *Causes of Death*. Current information is published in the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, the mimeograph bulletins *Births*, *Deaths*, *Marriages* (annual), and *Vital and Population Statistics* (quarterly).

In most tables the statistics of births, deaths and marriages exclude particulars of full-blood Aborigines for years before 1967. Differences between the statistics now published and those formerly published which implied the exclusion of Aboriginal vital events cannot be taken as reliable statistics of births, deaths, or marriages among full-blood Aborigines, because in many areas no satisfactory administrative or other basis existed for distinguishing vital events of full-blood Aborigines from those of part-Aborigines or the rest of the population.

Vital statistics for certain countries of the world are set out in International Vital Statistics at the end of this chapter.

#### Provisions for registration and compilation of statistics

In Australia vital statistics are compiled from information supplied for the registration of births, deaths, and marriages. Each State and Territory has an independent system of registration. Provisions for the civil registration of births, deaths, and marriages have been in force in Tasmania from 1839, in Western Australia from 1841, in South Australia from 1842, in Victoria from 1853, and in New South Wales and Queensland (then part of New South Wales) from 1856. Registration in the Territories is administered by the Commonwealth Government, registration having been taken over from South Australia in 1911 in respect of the Northern Territory and from New South Wales in 1930 in respect of the Australian Capital Territory. The authority responsible for the registration of births, deaths, and marriages occurring within his particular State or Territory is the Registrar-General (the Government Statist in Victoria) or the Principal Registrar.

The *Marriage Act* 1961–1966 came into operation on 1 September 1963, placing the marriage laws of all States, the mainland Territories and Norfolk Island on a uniform basis. Provision is made for the celebration of marriage by ministers of religion registered with the Registrar of Ministers of Religion appointed in each State and Territory by the Attorney-General, and by certain civil officers, in most cases district registrars. In each State or Territory the authorised celebrant is required to register particulars of the parties married with the appropriate registering authority as soon as practicable and in any case not later than fourteen days after the marriage.

Information concerning a birth is required to be supplied within 28 days in the Australian Capital Territory and the Northern Territory, and 60 days in the States. For the registration of a death the period allowed is 8 days in Tasmania, 14 days in South Australia, Western Australia, Australian Capital Territory, and Northern Territory, 21 days in Victoria, and 30 days in New South Wales and Queensland.

Information is required in all States and Territories concerning what have been commonly known as 'stillbirths'. These are excluded from all the tables of births and deaths in this chapter and are included only in the special tables on stillbirths shown on pages 169–70.

# Marriages

## Numbers of marriages and crude marriage rates

NOTE. Annual averages for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 575.

### MARRIAGES(a): STATES AND TERRITORIES, 1946 TO 1970

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Annual average—									
1946-50 . . .	30,162	20,453	10,666	6,581	5,205	2,529	114	181	75,891
1951-55 . . .	28,483	20,007	10,171	6,290	5,232	2,539	146	234	73,102
1956-60 . . .	28,432	20,422	10,254	6,517	5,145	2,573	190	321	73,854
1961-65 . . .	31,788	23,262	11,437	7,514	5,768	2,700	248	533	83,250
1966-70 . . .	39,216	29,481	14,717	9,920	8,147	3,330	394	983	106,188
Annual total—									
1967 . . .	37,077	28,004	13,634	9,434	7,430	3,213	325	883	100,000
1968 . . .	39,213	29,724	14,860	9,652	8,086	3,426	419	965	106,345
1969 . . .	41,286	30,860	15,669	10,599	8,993	3,532	413	1,118	112,470
1970 . . .	42,928	31,729	16,082	10,864	9,227	3,535	501	1,200	116,066

(a) Excludes particulars of full-blood Aborigines before 1966.

### CRUDE MARRIAGE RATES(a): STATES AND TERRITORIES, 1946 TO 1970

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Average annual rate—									
1946-50 . . .	9.90	9.72	9.41	9.87	10.01	9.56	9.39	9.36	9.77
1951-55 . . .	8.41	8.34	7.91	8.11	8.44	8.35	9.13	8.20	8.29
1956-60 . . .	7.70	7.50	7.14	7.26	7.36	7.69	8.63	7.51	7.50
1961-65 . . .	7.86	7.64	7.27	7.42	7.43	7.49	8.09	7.26	7.63
1966-70 . . .	8.92	8.85	8.48	8.79	8.92	8.71	6.14	8.64	8.80
Annual rate—									
1967 . . .	8.60	8.55	8.01	8.49	8.47	8.53	5.47	8.51	8.46
1968 . . .	8.94	8.93	8.57	8.57	8.89	8.96	6.52	8.56	8.83
1969 . . .	9.22	9.11	8.86	9.26	9.49	9.09	6.05	9.15	9.14
1970 . . .	9.38	9.20	8.93	9.32	9.39	9.00	6.97	8.99	9.23

(a) Number of marriages per 1,000 of mean population. Excludes particulars of full-blood Aborigines before 1966.

The crude marriage rates for Australia and the more populous countries of the world are shown for the latest available year in International Vital Statistics at the end of this chapter.



## Previous marital status

## PREVIOUS MARITAL STATUS OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1970

<i>Previous marital status of bridegrooms</i>	<i>Previous marital status of brides</i>			<i>Total bridegrooms</i>
	<i>Spinsters</i>	<i>Widows</i>	<i>Divorced</i>	
Bachelors . .	100,359	1,186	3,677	105,222
Widowers . .	905	1,700	855	3,460
Divorced . .	3,971	869	2,544	7,384
<b>Total brides .</b>	<b>105,235</b>	<b>3,755</b>	<b>7,076</b>	<b>116,066</b>

## Age and previous marital status at marriage

There were 17,443 males under 21 years of age married during 1970, while the corresponding number of females was 50,369.

## AGE AND PREVIOUS MARITAL STATUS OF BRIDEGROOMS AND BRIDES AUSTRALIA, 1970

<i>Age at marriage (years)</i>	<i>Bridegrooms</i>				<i>Brides</i>			
	<i>Bachelors</i>	<i>Widowers</i>	<i>Divorced</i>	<i>Total</i>	<i>Spinsters</i>	<i>Widows</i>	<i>Divorced</i>	<i>Total</i>
Under 20 . .	8,599	..	..	8,599	33,967	10	7	33,984
20-24 . .	63,431	27	194	63,652	57,526	129	683	58,338
25-29 . .	23,040	77	1,214	24,331	9,461	219	1,634	11,314
30-34 . .	5,699	118	1,392	7,209	2,266	222	1,260	3,748
35-39 . .	2,070	153	1,145	3,368	840	280	979	2,099
40-44 . .	1,152	250	1,099	2,501	429	422	877	1,728
45-49 . .	553	371	939	1,863	290	536	773	1,599
50-54 . .	292	472	624	1,388	183	516	429	1,128
55-59 . .	181	534	424	1,139	126	510	259	895
60-64 . .	101	501	214	816	81	428	102	611
65 and over .	104	957	139	1,200	66	483	73	622
<b>Total .</b>	<b>105,222</b>	<b>3,460</b>	<b>7,384</b>	<b>116,066</b>	<b>105,235</b>	<b>3,755</b>	<b>7,076</b>	<b>116,066</b>

## RELATIVE AGES OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1970

<i>Age of bridegroom (years)</i>	<i>Age of bride (years)</i>								<i>Total bridegrooms</i>
	<i>Under 15</i>	<i>15-19</i>	<i>20-24</i>	<i>25-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-44</i>	<i>45 and over</i>	
Under 20 . .	2	7,077	1,479	37	4	..	..	..	8,599
20-24 . .	4	22,882	38,169	2,315	229	36	12	5	63,652
25-29 . .	..	3,469	14,953	4,899	766	186	36	22	24,331
30-34 . .	..	442	2,780	2,442	1,031	341	119	54	7,209
35-39 . .	..	70	638	937	826	504	239	154	3,368
40-44 . .	..	24	192	443	512	505	419	406	2,501
45-49 . .	..	9	81	147	231	315	421	659	1,863
50-54 . .	..	2	28	61	99	130	274	794	1,388
55-59 . .	..	3	12	16	35	53	133	887	1,139
60-64 . .	..	..	4	12	10	17	51	722	816
65 and over .	..	..	2	5	5	12	24	1,152	1,200
<b>Total brides</b>	<b>6</b>	<b>33,978</b>	<b>58,338</b>	<b>11,314</b>	<b>3,748</b>	<b>2,099</b>	<b>1,728</b>	<b>4,855</b>	<b>116,066</b>

The average age at marriage of brides and bridegrooms has declined during recent years. The average ages, in years, of brides for each of the five years to 1970 were: 1966, 24.02; 1967, 24.03; 1968, 23.90; 1969, 23.84 and 1970, 23.78. The average ages, in years, of bridegrooms were: 1966, 27.10; 1967, 27.01; 1968, 26.76; 1969, 26.63 and 1970, 26.55. The difference in the average age at marriage between brides and bridegrooms is generally about three years, the difference in 1970 being 2.77 years.

### Countries of birth of persons marrying

#### RELATIVE COUNTRIES OF BIRTH OF BRIDEGROOMS AND BRIDES AUSTRALIA, 1970

Country of birth of bridegroom	Country of birth of bride										Total bridegrooms
	Australia	New Zealand	United Kingdom and Ireland	Germany	Greece	Italy	Malta	Netherlands	Yugoslavia	Other European and unspecified	
Australia . . . . .	76,228	398	4,899	953	74	293	211	790	81	485	85,485
New Zealand . . . . .	911	144	114	15	..	6	2	11	1	13	1,251
United Kingdom and Ireland . . . . .	7,116	129	2,312	173	12	39	49	125	12	103	10,339
Germany . . . . .	1,459	19	213	316	2	16	9	51	18	107	2,272
Greece . . . . .	248	6	23	7	2,102	12	2	6	14	21	2,552
Italy . . . . .	1,117	16	156	35	14	2,060	45	31	25	50	3,632
Malta . . . . .	336	1	54	13	2	3	356	7	1	6	793
Netherlands . . . . .	1,208	16	150	29	2	8	14	270	6	27	1,782
Yugoslavia . . . . .	341	7	57	45	36	31	5	19	1,057	68	1,701
Other European . . . . .	1,145	24	191	140	18	19	12	33	36	791	2,545
Other and unspecified . . . . .	1,732	50	240	65	93	46	14	44	14	82	3,714
<b>Total brides</b> . . . . .	<b>91,841</b>	<b>810</b>	<b>8,409</b>	<b>1,791</b>	<b>2,355</b>	<b>2,533</b>	<b>719</b>	<b>1,387</b>	<b>1,265</b>	<b>1,753</b>	<b>116,066</b>

### Celebration of marriages

Under the provisions of the *Marriage Act* 1961–1966 marriages may be celebrated either by ministers of religion who are registered for that purpose with the Registrars of Ministers of Religion in each State or Territory, or by certain civil officers, in most cases district registrars. Most of the marriages are celebrated by ministers of religion. The registered ministers in 1970 belonged to more than fifty different religious denominations.

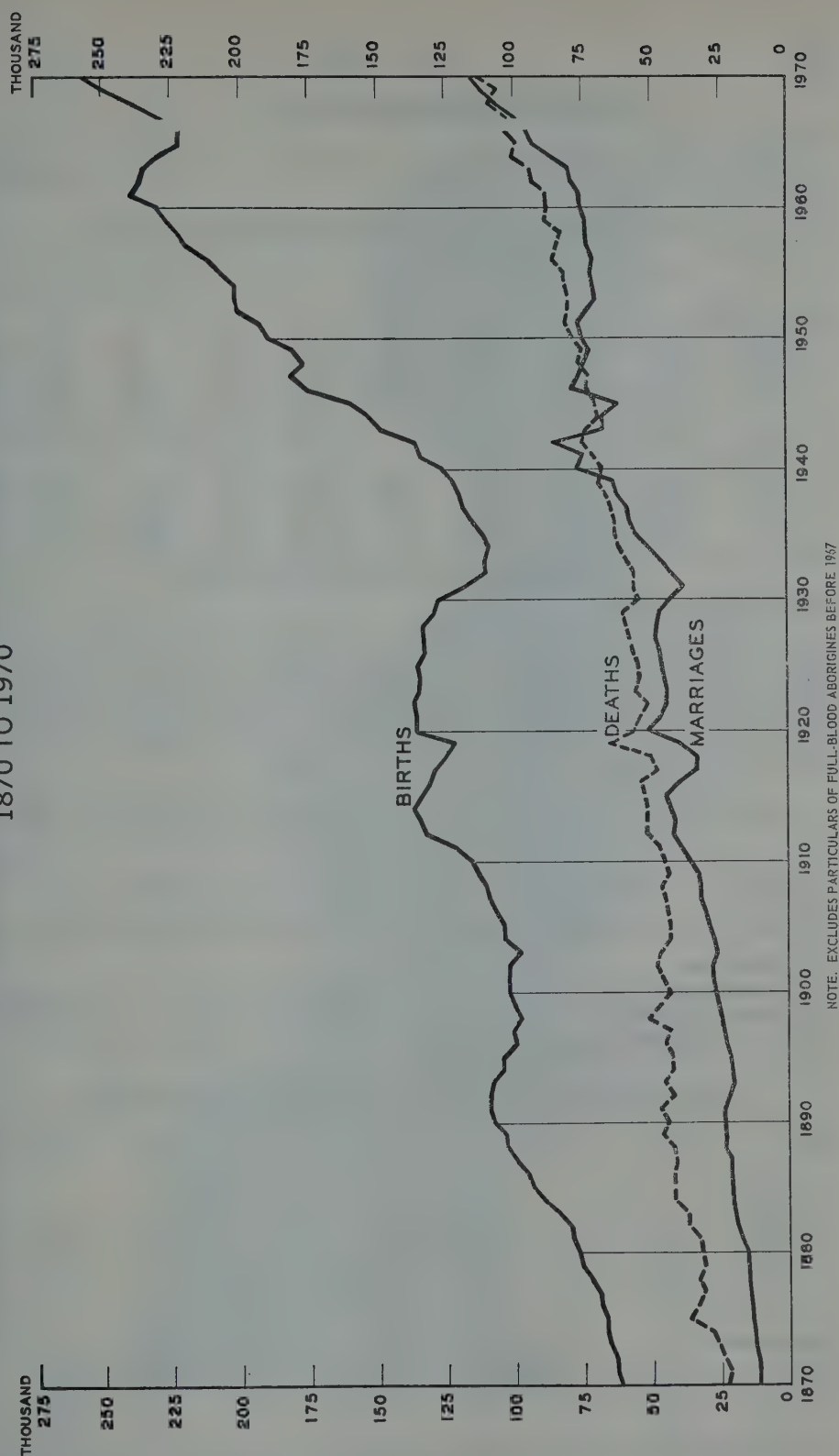
#### MARRIAGES BY AUTHORISED CELEBRANTS: STATES AND TERRITORIES, 1970

Australia										Pro- portion of total
Category of authorised celebrant	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	No.	
Registered Ministers of recog- nised religious denomina- tions—										
Roman Catholic . . . . .	12,181	9,497	4,328	2,275	2,490	738	123	396	32,028	27.6
Church of England . . . . .	12,996	7,278	4,102	2,115	2,778	1,431	70	298	31,068	26.8
Methodist . . . . .	4,423	3,353	2,263	2,637	962	477	51	43	14,209	12.2
Presbyterian . . . . .	3,885	4,816	2,243	378	475	160	52	97	12,106	10.4
Orthodox . . . . .	1,234	1,406	107	184	75	8	29	18	3,061	2.6
Baptist . . . . .	670	524	299	297	133	97	5	17	2,042	1.8
Lutheran . . . . .	202	306	457	585	47	7	12	19	1,635	1.4
Churches of Christ . . . . .	177	520	144	329	175	23	..	19	1,387	1.2
Congregational . . . . .	328	390	115	342	123	45	11	2	1,356	1.2
Salvation Army . . . . .	166	172	100	59	33	23	3	4	560	0.5
Other . . . . .	700	818	357	215	144	81	9	16	2,340	2.0
Other authorised celebrants—										
Ministers of religion . . . . .	145	170	26	59	38	1	..	..	439	0.4
Civil officers . . . . .	5,821	2,479	1,541	1,389	1,754	444	136	271	13,835	11.9
Grand Total . . . . .	42,928	31,729	16,082	10,864	9,227	3,535	501	1,200	116,066	100.0
Proportion of total (per cent)—										
Ministers of religion . . . . .	86.44	92.19	90.42	87.21	80.99	87.44	72.85	77.42	88.08	..
Civil officers . . . . .	13.56	7.81	9.58	12.79	19.01	12.56	27.15	22.58	11.92	..

### Divorce

See the chapter Law, Order, and Public Safety.

# BIRTHS, DEATHS AND MARRIAGES: AUSTRALIA 1870 TO 1970





## Births and Fertility

### Number of live births

NOTE. Corresponding figures for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 583.

#### LIVE BIRTHS(a): STATES AND TERRITORIES, 1946 TO 1970

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1946-50 .	68,856	47,372	28,003	16,270	13,130	7,064	289	734	181,718
1951-55 .	73,737	53,770	30,983	18,045	15,724	7,774	468	922	201,423
1956-60 .	79,613	61,279	34,171	19,977	16,922	8,517	694	1,286	222,459
1961-65 .	82,896	65,193	35,357	21,377	16,861	8,439	897	1,932	232,952
1966-70 .	82,560	68,755	35,378	21,310	19,426	7,979	2,134	2,783	240,325
Annual total—									
1967 .	78,841	65,485	34,692	20,386	18,023	7,547	1,921	2,401	229,296
1968 .	81,696	70,228	35,190	21,207	19,541	8,317	2,084	2,643	240,906
1969 .	86,036	71,035	36,576	21,977	20,754	8,445	2,274	3,079	250,176
1970 .	88,448	73,019	37,530	22,617	21,618	8,185	2,624	3,475	257,516

(a) Excludes particulars of full-blood Aborigines before 1966.

### Masculinity of live births

The masculinity of live births, is the number of males born for every 100 female births. When the number of births for which masculinity is being calculated is small (for example, totals for smaller States) considerable variation is shown. The averages for the ten years 1961-70 were as follows: New South Wales, 105.53; Victoria, 105.59; Queensland, 105.35; South Australia, 105.88; Western Australia, 106.09; Tasmania, 106.14; Northern Territory, 105.48; Australian Capital Territory, 105.97; Australia, 105.62. The following table shows the figures for Australia for each ten-year period from 1901 to 1960 and for each of the years 1967 to 1969.

#### MASCULINITY(a) OF LIVE BIRTHS REGISTERED: AUSTRALIA, 1901 TO 1969

	1901-10	1911-20	1921-30	1931-40	1941-50	1951-60	1967	1968	1969
Total births .	105.22	105.27	105.55	105.12	105.38	105.43	105.43	105.41	105.22
Ex-nuptial births .	104.08	105.25	105.16	105.36	105.34	103.99	106.16	104.21	103.95

(a) Number of males born for every 100 female births. Excludes particulars of full-blood Aborigines before 1967.

### Crude birth rates

The simplest method of measuring fertility is to relate the number of births to the mean population, which gives the crude birth rate. The crude birth rate measures the rate per thousand persons (irrespective of age or sex) at which the population has added to its numbers by way of births during a given period. Other methods of measuring fertility are shown on pages 161 and 163.

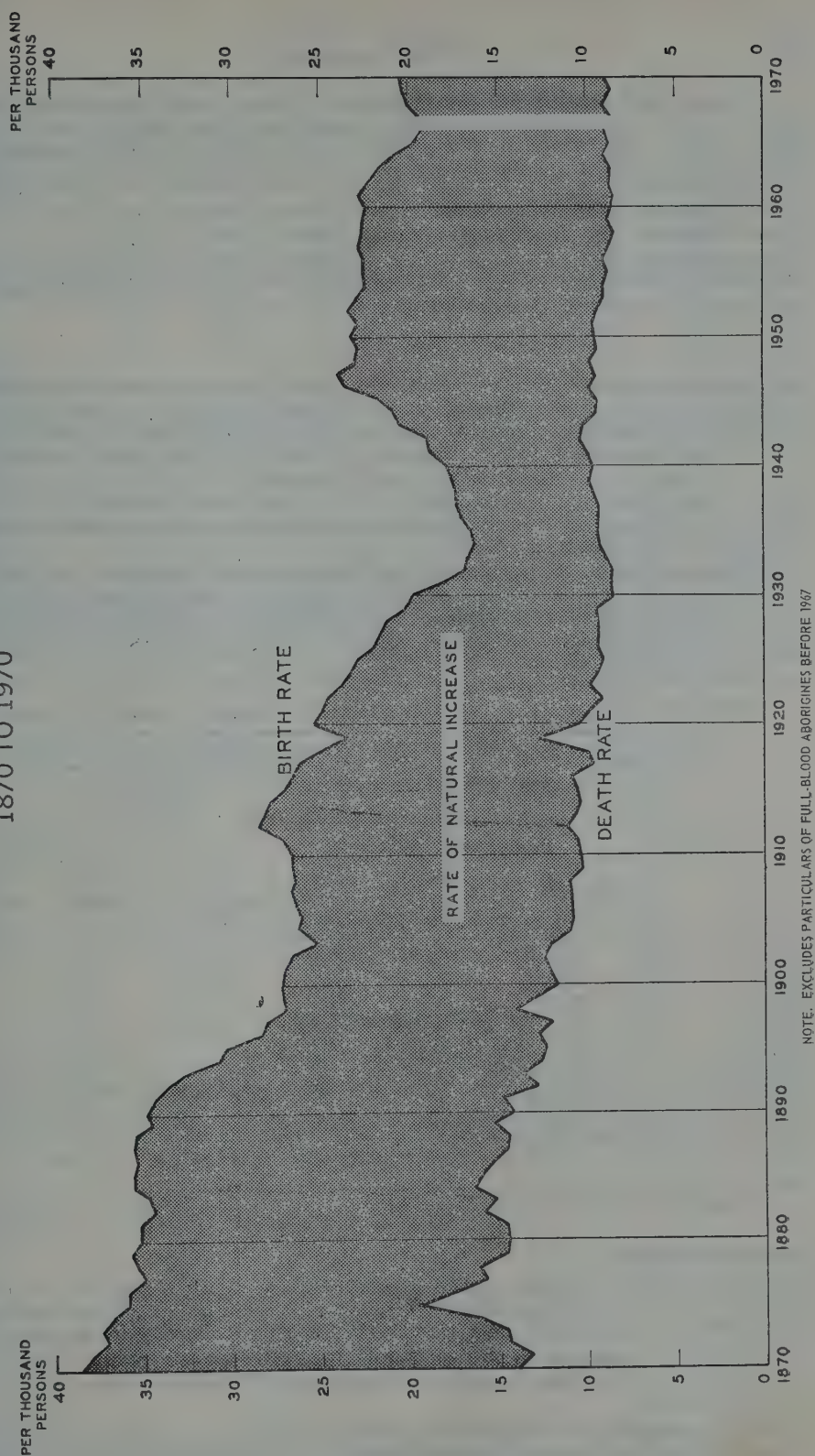
#### CRUDE BIRTH RATES(a): STATES AND TERRITORIES, 1946 TO 1970

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average annual rates—									
1946-50 .	22.60	22.51	24.69	24.41	25.24	26.71	23.77	37.92	23.39
1951-55 .	21.78	22.42	24.11	23.25	25.37	25.58	29.37	32.22	22.86
1956-60 .	21.55	22.52	23.80	22.27	24.20	25.45	31.49	30.10	22.59
1961-65 .	20.49	21.42	22.49	21.11	21.71	23.41	29.30	26.31	21.34
1966-70 .	18.77	20.63	20.37	18.88	21.27	20.86	33.28	24.47	19.91
Annual rates—									
1967 .	18.30	19.98	20.38	18.34	20.55	20.04	32.20	23.15	19.40
1968 .	18.62	21.10	20.30	18.84	21.47	21.76	32.42	23.44	20.00
1969 .	19.21	20.97	20.67	19.19	21.91	21.73	33.34	25.19	20.33
1970 .	19.33	21.17	20.83	19.41	21.99	20.83	36.51	26.04	20.48

(a) Number of births per 1,000 of mean population. Excludes particulars of full-blood Aborigines before 1966.

# RATES OF BIRTHS, DEATHS AND NATURAL INCREASE: AUSTRALIA

1870 TO 1970



The birth rates in the table above are based on *live births registered in the respective States and Territories*. Some confinements, however, take place in States other than the State in which the mother usually resides, particularly in areas near State borders. The variations thus caused in the birth rates for the States and Territories by referring the birth registrations to the mother's usual residence are shown by the following corrected rates for 1969—New South Wales, 19.28, Victoria, 20.94; Queensland, 20.61; South Australia, 19.03; Western Australia, 21.93; Tasmania, 21.81; Northern Territory, 34.16; and Australian Capital Territory, 25.04.

A graph showing the birth rate for each year from 1870 to 1970 is shown on page 159. The crude birth rates of Australia and the more populous countries of the world for the latest available year are shown in International Vital Statistics at the end of this chapter.

### Fertility rates

Changes in the crude birth rate are in general indicative of changes in fertility. However they may result from changes in the proportion of women of childbearing age in the population. Changes in the proportion of such women who are married may also affect fertility and the crude birth rate.

The fertility rates in the following table are for the Census years 1881 to 1966. The births for the three years around the census are related to women of childbearing age as enumerated at each census. Although the child bearing age has been taken to be 15–44 years, births to younger and older women are included in the computations. Nuptial births are related to married women aged 15–44 years to give married fertility rates.

Although married fertility fell by 59 per cent between 1880–82 and 1965–67, total fertility and the crude birth rate fell by only 44 and 45 per cent. The effect of a decline in the fertility of married women on total fertility and the crude birth rate is partly offset by an increase in the proportion of such women in the population. In 1881 only 51 per cent of females aged 15–44 were married but in 1966, 67 per cent were married.

### CRUDE BIRTH RATES AND FERTILITY RATES: AUSTRALIA, 1880-82 TO 1965-67(a)

Period	Average annual rates			Index Nos (Base: 1880-82 = 100)		
	Fertility rates			Fertility rates		
	Crude birth rate(b)	Births per 1,000 women aged 15-44 years	Nuptial births per 1,000 married women aged 15-44 years	Crude birth rate(b)	Births per 1,000 women aged 15-44 years	Nuptial births per 1,000 married women aged 15-44 years
1880-82 . . .	35.3	170	321	100	100	100
1890-92 . . .	34.5	159	332	98	94	103
1900-02 . . .	27.2	117	235	77	69	73
1910-12 . . .	27.2	117	236	77	69	74
1920-22 . . .	25.0	107	197	71	63	61
1932-34 . . .	16.7	71	131	47	42	41
1946-48 . . .	23.6	104	160	67	61	50
1953-55 . . .	22.7	109	149	64	64	46
1960-62 . . .	22.5	112	154	64	66	48
1965-67 . . .	19.5	95	132	55	56	41

(a) Excludes particulars of full-blood Aborigines before 1965-67.

(b) Number of births per 1,000 of mean population.

### Age-specific birth rates

Fertility within the childbearing group varies considerably, as may be seen from the five-year age-specific rates in the following table. These rates were obtained by dividing births according to age of mother by the estimated number of women in the corresponding five-year age group.

Total fertility is obtained by summing single age specific rates. This total represents the hypothetical number of children a woman would bear during her lifetime if she experienced the rates of the year shown.

Since 1946 the fertility of younger women has increased, largely as a result of younger marriage, whereas fertility in the thirties and forties had declined. Total fertility rose to a peak in 1961.



## AGE-SPECIFIC BIRTH RATES(a): AUSTRALIA, 1946 TO 1969

Age group (years)	1946-50 (b)	1951-55 (b)	1956-60 (b)	1961-65 (b)	1966	1967	1968	1969
15-19 . . .	33.05	39.54	44.20	46.50	48.89	48.37	48.88	48.98
20-24 . . .	164.22	192.82	216.42	203.95	173.07	170.76	173.64	174.15
25-29 . . .	183.28	192.97	211.47	207.15	183.88	184.97	190.80	191.60
30-34 . . .	126.56	123.51	126.06	122.38	105.12	102.77	103.30	103.51
35-39 . . .	72.33	65.05	63.91	59.18	50.62	47.85	46.74	45.56
40-44 . . .	22.71	20.50	18.96	17.54	14.16	13.49	12.89	12.16
45-49 . . .	1.75	1.53	1.45	1.19	1.04	1.09	1.05	1.01
<b>Total fertility (c)</b>	<b>3.006</b>	<b>3.175</b>	<b>3.430</b>	<b>3.311</b>	<b>2.889</b>	<b>2.864</b>	<b>2.899</b>	<b>2.889</b>

(a) Number of births per 1,000 women in each age group. Excludes particulars of full-blood Aborigines before 1967.  
 (b) Average annual rates. (c) See next preceding table

## Gross and net reproduction rates

The gross reproduction rate is derived from total fertility and the ratio of female to total births. It indicates the number of female children who would be born on average to women supposing the rates from which it was calculated were to apply throughout the reproductive period. It is an indication of the extent to which the population is reproducing itself except that it does not allow for females who failed to survive to the end of the childbearing period. The net reproduction rate allows for such mortality. It is obtained by multiplying the age-specific rates by the survivor proportions in the corresponding age group of the stationary or life table population. Mortality in childhood and young adulthood is now so low that there is little difference between current gross and net reproduction rates.

## GROSS AND NET REPRODUCTION RATES(a): AUSTRALIA, 1881 TO 1969

Year	Gross reproduction rate	Net reproduction rate	Year	Gross reproduction rate	Net reproduction rate
1881(b) . . . .	2.65	(c)1.88	1951. . . . .	1.486	(h)1.428
1891(b) . . . .	2.30	(c)1.73	1954. . . . .	1.559	(i)1.499
1901(b) . . . .	1.74	(d)1.39	1961. . . . .	1.728	(j)1.672
1911. . . . .	1.693	(e)1.395	1965. . . . .	1.447	(j)1.400
1921. . . . .	1.516	(f)1.317	1966. . . . .	1.400	(j)1.355
1931. . . . .	1.144	(g)1.043	1967. . . . .	1.387	(j)1.342
1941. . . . .	1.152	(g)1.092	1968. . . . .	1.406	(j)1.360
1947. . . . .	1.494	(h)1.416	1969. . . . .	1.405	(j)1.360

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Approximate only. (c) 1881-1890 mortality experience used. (d) 1891-1900 mortality experience used. (e) 1901-1910 mortality experience used. (f) 1920-1922 mortality experience used. (g) 1932-1934 mortality experience used. (h) 1946-1948 mortality experience used. (i) 1953-1955 mortality experience used. (j) 1960-1962 mortality experience used.

## AGE SPECIFIC BIRTH RATES: AUSTRALIA

1921 TO 1969

(NUMBER OF BIRTHS PER 1,000 OF FEMALE POPULATION IN EACH AGE GROUP)

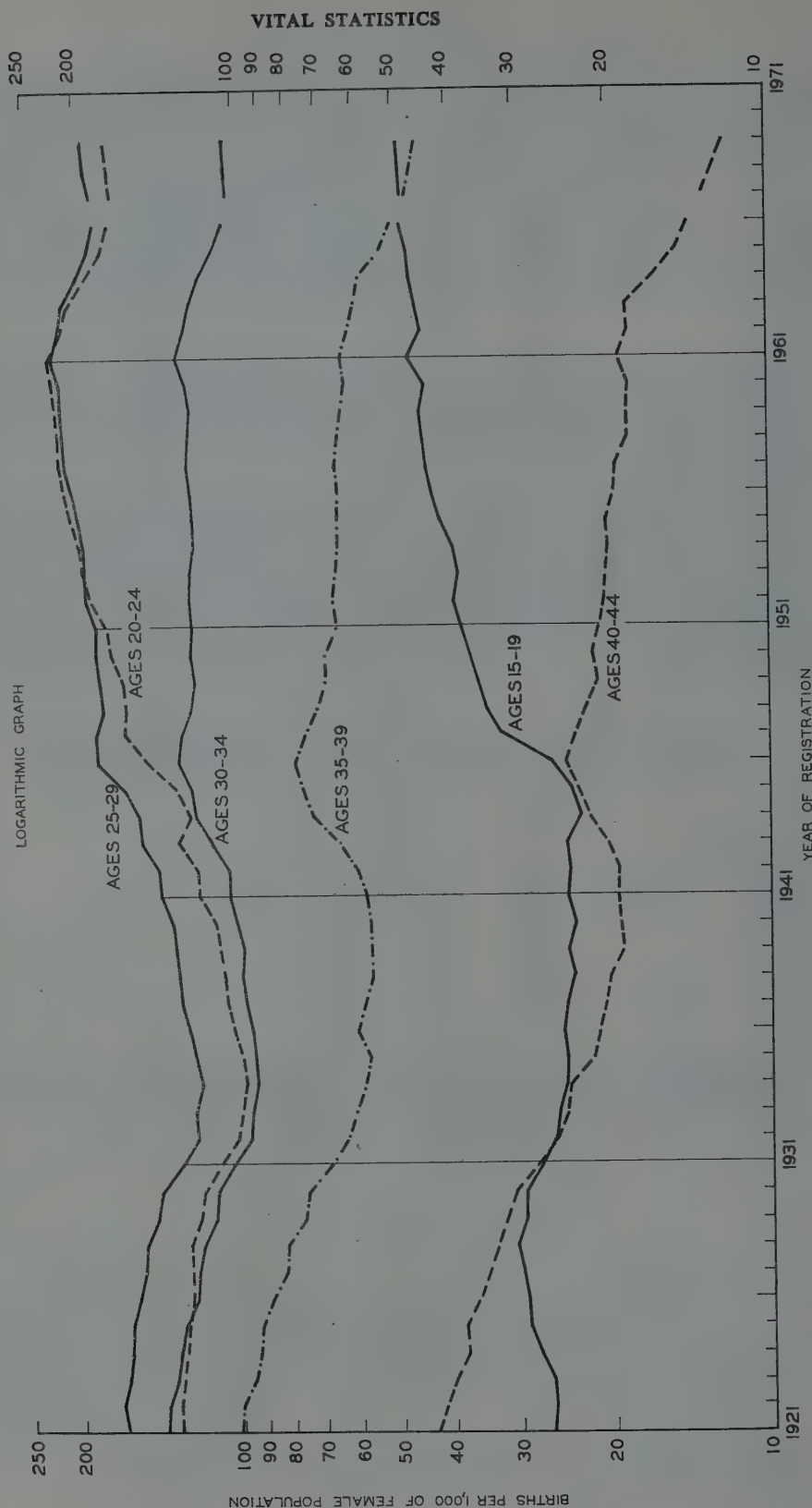


PLATE 21

Note. (1) The vertical scale is logarithmic, and the curves rise and fall according to the rate of increase and decrease; actual numbers are indicated by the scale.  
 (2) There is a break in continuity between 1966 and 1967. From 1967 the figures include Aborigines. Prior to 1967 birth registrations identified as those of full-blood Aborigines were excluded.

In the following table a comparison is given of the gross and net reproduction rates recorded for various countries in the period 1966 to 1969. The registration of vital events has not been fully established in many countries and consequently details for the calculation of reproduction rates for those countries are not available. In order that the table should be as representative as possible some countries have been included even though the gross reproduction rate is the only figure available.

### GROSS AND NET PRODUCTION RATES: VARIOUS COUNTRIES

(Source: *The Population Index*, April-June 1969, Office of Population Research, Princeton University)

Country	Period	Reproduction rate		Country	Period	Reproduction rate	
		Gross	Net			Gross	Net
Panama . . . . .	1967	2.55	..	Austria . . . . .	1967	1.27	1.22
Mauritius . . . . .	1968	2.25	1.99	Canada . . . . .	1967	1.26	1.23
China (Taiwan) . . . . .	1967	2.04	1.91	United States of America . . . . .	1967	1.26	1.21
Ireland . . . . .	1966	1.91	1.82	Germany, Fed. Rep. . . . .	1966	1.23	1.18
Chile . . . . .	1967	1.89	1.57	Yugoslavia . . . . .	1967	1.23	1.11
Israel . . . . .	1966	1.79	..	Belgium . . . . .	1967	1.17	1.13
Romania . . . . .	1967	1.76	1.65	Greece . . . . .	1967	1.17	1.10
Iceland . . . . .	1967	1.59	1.55	Denmark . . . . .	1967	1.14	1.11
New Zealand . . . . .	1967	1.57	1.52	Finland . . . . .	1966	1.14	1.09
Australia . . . . .	1969	1.41	1.36	Bulgaria . . . . .	1968	1.12	1.08
Scotland . . . . .	1966	1.40	1.35	Sweden . . . . .	1967	1.11	1.09
Norway . . . . .	1966	1.39	1.35	Germany, Dem. Rep. . . . .	1967	1.11	1.07
Portugal . . . . .	1967	1.39	1.25	Czechoslovakia . . . . .	1967	1.02	0.98
England and Wales . . . . .	1966	1.33	1.29	Hungary . . . . .	1968	1.00	0.95
Netherlands . . . . .	1968	1.31	1.28	Japan . . . . .	1966	0.77	0.74
France . . . . .	1967	1.29	1.25				

### Fertility of marriages

Estimates of the fertility of marriages may be made by relating nuptial births in each year to the marriages from which they could have resulted. Births to women of a certain number of years duration of marriage are related to the number of marriages taking place that number of years previously and the resulting rates are added to give a total for all durations, the index of current marriage fertility.

The figure for a particular year gives the estimated number of children which a thousand marriages would produce according to the fertility conditions of that year.

Births are omitted from the calculation if the marriage did not take place in Australia. Births which occur overseas to Australian marriages cannot be included and hence some understatement is present.

The following table gives an analysis of the index, shown in the Total column, according to duration of marriage, expressing the results as births per thousand marriages.

### DURATION—SPECIFIC FERTILITY RATES(a): AUSTRALIA, 1958 TO 1969

Year of birth	Duration of marriage (years)										Total
	Under 1	1	2	3	4	Total under 5	5-9	10-14	15-19	20 and over	
1958 . . . . .	365	318	309	280	242	1,514	757	290	101	27	2,689
1959 . . . . .	379	319	316	279	249	1,542	760	298	99	25	2,724
1960 . . . . .	382	322	317	288	249	1,558	772	302	100	25	2,757
1961 . . . . .	403	332	328	290	254	1,607	789	314	106	26	2,842
1962 . . . . .	389	318	324	290	247	1,568	781	308	101	22	2,780
1963 . . . . .	384	307	318	288	241	1,538	756	302	105	24	2,725
1964 . . . . .	368	288	296	275	231	1,458	712	283	99	21	2,573
1965 . . . . .	341	275	287	261	222	1,386	662	260	90	19	2,417
1966 . . . . .	324	258	282	260	215	1,339	638	238	84	19	2,318
1967 . . . . .	308	251	273	268	222	1,322	648	239	80	18	2,307
1968 . . . . .	308	247	280	267	235	1,337	668	234	79	17	2,335
1969 . . . . .	290	246	279	270	231	1,316	688	233	75	17	2,329

(a) Number of births per thousand marriages. From 1967 includes births of Aborigines where parents were legally married and excludes births of tribal marriages.



The summation of duration-specific rates for a particular year without reference to changing patterns in age at marriage or age of parents contributes to the hypothetical nature of the index. It is more satisfactory, therefore, to express the rates in cohort form by following the experience of marriages of a particular year cumulated over successive durations of marriage.

Since the fertile period of a marriage has a duration of up to some thirty years, completed fertility can only be determined with certainty for marriages occurring before 1940. Fortunately, because of the concentration of births in the early years of marriage the ultimate level of fertility and the size of family can be assessed with a fair degree of precision by the end of the fifteenth year. The most recent cohort to reach this duration was that of 1954-55.

To determine the relevant marriage cohorts from which births can have derived, a system of quarterly weights is applied. Births in 1969 to marriages in their third year, for example, could have arisen from marriages in any one of the eight quarters of 1966 and 1967. Proportions of the marriages in each of these quarters, namely  $\frac{1}{8}$ ,  $\frac{3}{8}$ ,  $\frac{3}{8}$ ,  $\frac{7}{8}$ ,  $\frac{3}{8}$ ,  $\frac{3}{8}$ , and  $\frac{1}{8}$  respectively, are summed to arrive at the total marriages in the 1966-67 cohort. This method is applied to all marriages of completed durations three or more years. The first two years of marriage are weighted on a monthly basis.

**CUMULATED DURATION—SPECIFIC FERTILITY RATES, MARRIAGE COHORTS(a)**  
**AUSTRALIA, 1954 TO 1969**

Marriages of year—	Completed duration of marriage (years)						
	1	2	3	4	5	10	15
1954-55 . .	342	646	956	1,236	1,485	2,258	2,501
1955-56 . .	352	674	983	1,262	1,511	2,262	..
1956-57 . .	367	685	1,001	1,289	1,543	2,262	..
1957-58 . .	365	684	1,001	1,291	1,538	2,219	..
1958-59 . .	379	701	1,029	1,319	1,560	2,216	..
1959-60 . .	382	714	1,038	1,326	1,557	2,210	..
1960-61 . .	403	721	1,039	1,314	1,536	..	..
1961-62 . .	389	696	992	1,253	1,468	..	..
1962-63 . .	384	672	959	1,219	1,441	..	..
1963-64 . .	368	643	925	1,193	1,428	..	..
1964-65 . .	341	599	872	1,139	1,370	..	..
1965-66 . .	324	575	855	1,125	..	..	..
1966-67 . .	308	555	834	..	..	..	..
1967-68 . .	308	554	..	..	..	..	..
1968-69 . .	290	..	..	..	..	..	..

(a) Cumulated number of births per thousand marriages. From 1967 includes births of Aborigines where parents were legally married and excludes births of tribal marriages.

A more detailed analysis of the figures in the above table and of earlier cohorts has been made by tabulating the number of births within each duration of marriage which were first, second, third or subsequent births to the marriages under consideration. Details then derived of relative family size at each duration of marriage have enabled the computation of duration-parity-specific fertility rates.

#### Ex-nuptial live births

The variations in the proportions of ex-nuptial live births as between the individual States and Territories for 1969 and for Australia at intervals from 1901 to 1969 are shown in the following tables.

**EX-NUPTIAL LIVE BIRTHS**  
**NUMBER AND PROPORTION, STATES AND TERRITORIES, 1969**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number .	6,860	4,098	3,835	1,508	2,231	647	315	91	19,585
Proportion of total births % .	7.97	5.77	10.49	6.86	10.75	7.66	13.85	2.96	7.83

**EX-NUPTIAL LIVE BIRTHS: NUMBERS, PROPORTION AND RATES<sup>(a)</sup>**  
**AUSTRALIA, 1901 TO 1969**

	<i>Annual average</i>						1965	1966	1967	1968	1969
	1901-10	1911-20	1921-30	1931-40	1941-50	1951-60					
Number	6,498	6,836	6,238	5,133	6,780	9,013	15,531	16,541	17,734	19,171	19,585
Rates <sup>(b)</sup>	1.60	1.39	1.04	0.76	0.90	0.97	1.37	1.43	1.50	1.59	1.59
Proportion of total births%	6.05	5.22	4.66	4.40	4.13	4.25	6.97	7.43	7.73	7.96	7.83

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Number of ex-nuptial births per 1,000 of mean population.

A further measure of ex-nuptiality is obtained by calculating the number of ex-nuptial births per thousand of the single, widowed and divorced female population aged from 15 to 44 years. On this basis, the number of ex-nuptial births per 1,000 unmarried women of ages 15 to 44 is as follows: 1880-82, 14.49; 1890-92, 15.93; 1900-02, 13.30; 1910-12, 12.53; 1920-22, 10.50; 1932-34, 6.91; 1946-48, 11.45; 1953-55, 14.45; 1960-62, 18.49; and 1965-67, 20.96. Particulars of full-blood Aborigines are excluded throughout. Ex-nuptial births to married women, which are not recorded separately, are included in these figures and it is not possible to determine to what extent they influence the trend shown.

### Legitimations

Under the provisions of the Commonwealth *Marriage Act* 1961-1966, which came into operation on 1 September 1963, a child whose parents were not married to each other at the time of its birth becomes legitimised on the subsequent marriage of its parents. The legitimation takes place whether or not there was a legal impediment to the marriage of the parents at the time of the child's birth and whether or not the child was still living at the time of the marriage, or in the case of a child born before 1 September 1963, at that date. Prior to the introduction of this Act, legitimations took place under Acts passed in the several States to legitimise children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Acts, any child who came within the scope of their purposes, born before or after the passing thereof, was deemed to be legitimate from birth by the post-natal union of its parents and entitled to the status of offspring born in wedlock. The number of children legitimised in Australia during 1969 was 3,229.

### Multiple births

Because the current Australian birth statistics are based only on those confinements which resulted in a live-born child, the number of confinements for multiple births for Australia is understated—firstly, because in cases where all children of a multiple birth are stillborn the confinement is excluded, and secondly, because some cases of multiple births in which only one child was live born are registered as single births.

### Number of confinements

The following table shows the number of confinements resulting in single or multiple live births and the number of live births.

**LIVE BIRTHS AND CONFINEMENTS: STATES AND TERRITORIES, 1969**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>LIVE BIRTHS</b>									
Single births.	84,192	69,549	35,855	21,553	20,349	8,277	2,221	3,017	245,013
Twins.	1,812	1,462	715	421	403	165	53	59	5,090
Triplets	28	20	6	3	2	3	..	3	65
Quadruplets	4	4	..	..	..	..	..	..	8
Males	44,136	36,421	18,741	11,262	10,595	4,337	1,170	1,609	128,271
Females	41,900	34,614	17,835	10,715	10,159	4,108	1,104	1,470	121,905
<b>Total</b>	<b>86,036</b>	<b>71,035</b>	<b>36,576</b>	<b>21,977</b>	<b>20,754</b>	<b>8,445</b>	<b>2,274</b>	<b>3,079</b>	<b>250,176</b>

LIVE BIRTHS AND CONFINEMENTS: STATES AND TERRITORIES, 1969—*continued*

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
STILLBIRTHS ASSOCIATED WITH MULTIPLE BIRTHS INCLUDED ABOVE									
Twins . .	44	22	1	1	11	1	1	1	82
Triplets . .	2	1	..	..	1	..	..	..	4
Quadruplets .	..	4	..	..	..	..	..	..	4

## CONFINEMENTS RESULTING IN BIRTHS SHOWN ABOVE

Nuptial . .	78,322	66,238	32,401	20,272	18,342	7,719	1,937	2,958	228,189
Ex-nuptial .	6,809	4,062	3,814	1,493	2,215	642	311	90	19,436
<b>Total . .</b>	<b>85,131</b>	<b>70,300</b>	<b>36,215</b>	<b>21,765</b>	<b>20,557</b>	<b>8,361</b>	<b>2,248</b>	<b>3,048</b>	<b>247,625</b>

NOTE. Owing to the registration procedure adopted in some States, it is possible that in some cases where one child only of a multiple pregnancy was liveborn, the confinement has been treated as a single birth. However, the numbers of multiple births are not significantly affected. See also page 168.

Multiple births recorded during 1969 comprised 2,586 cases of twins, 23 cases of triplets, and three cases of quadruplets, the resulting number of live born and stillborn children respectively 5,090 and 82 for twins, 65 and 4 for triplets, and 8 and 4 for quadruplets. This represents an average of 10.44 recorded cases of twins and 0.09 recorded cases of triplets per 1,000 confinements or, alternatively, mothers of twins represented 1 in every 96 mothers and mothers of triplets 1 in every 10,766. Total cases of multiple births represented 10.54 per 1,000 confinements or 1 in every 95 mothers.

## Confinements—relative ages of parents

The relative ages of the parents of children whose births were registered in 1969 have been tabulated separately for male and female births, multiple births being distinguished from single births. For confinements and for multiple births, the relative ages of parents are shown in *Demography*, Bulletin No. 85.

## CONFINEMENTS, BY RELATIVE AGES OF PARENTS: AUSTRALIA, 1969

Age of father (years)	Age of mother (years)									Total
	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 and over	Not stated	
Under 20 . . . . .	3	3,315	650	7	2	..	..	..	..	3,977
20-24 . . . . .	6	12,458	33,013	2,793	143	12	..	..	..	48,425
25-29 . . . . .	3	2,307	36,903	35,654	2,808	181	24	2	1	77,883
30-34 . . . . .	1	416	8,042	26,886	16,129	1,486	120	..	3	53,083
35-39 . . . . .	2	98	1,485	6,337	11,990	6,527	547	17	1	27,204
40-44 . . . . .	1	26	333	1,451	3,571	4,958	1,935	67	..	12,342
45-49 . . . . .	..	9	95	322	729	1,332	1,162	167	1	3,817
50-54 . . . . .	..	4	39	89	155	271	315	62	1	936
55-59 . . . . .	..	4	14	31	52	96	81	25	..	303
60-64 . . . . .	..	1	5	5	19	29	25	5	..	89
65 and over(a) . . . .	3	8	22	25	14	33	13	4	8	130
<b>Total nuptial . . . .</b>	<b>19</b>	<b>18,646</b>	<b>80,601</b>	<b>73,800</b>	<b>35,612</b>	<b>14,925</b>	<b>4,222</b>	<b>349</b>	<b>15</b>	<b>228,189</b>
<b>Total ex-nuptial . .</b>	<b>114</b>	<b>7,247</b>	<b>6,514</b>	<b>2,737</b>	<b>1,539</b>	<b>903</b>	<b>337</b>	<b>23</b>	<b>22</b>	<b>19,436</b>
<b>Total . . . . .</b>	<b>133</b>	<b>25,893</b>	<b>87,115</b>	<b>76,537</b>	<b>37,151</b>	<b>15,828</b>	<b>4,559</b>	<b>372</b>	<b>37</b>	<b>247,625</b>

(a) Includes eighty-eight confinements in which the age of the father was not stated.



**Confinements—relative countries of birth of parents**

The following table shows the relative countries of birth of parents of children whose births from nuptial confinements were registered during 1969.

**NUPTIAL CONFINEMENTS, BY RELATIVE COUNTRIES OF BIRTH OF PARENTS  
AUSTRALIA, 1969**

Country of birth of father	Country of birth of mother											Total fathers
	Australia	New Zealand	United Kingdom and Ireland	Germany	Greece	Italy	Malta	Netherlands	Yugoslavia	Other European	Other and unspecified	
Australia . . .	149,884	744	7,335	1,238	140	396	327	1,280	96	706	1,326	163,472
New Zealand . . .	813	426	106	10	..	1	4	15	1	10	32	1,418
United Kingdom and Ireland . . .	9,098	154	8,679	201	11	44	66	199	13	148	393	19,006
Germany . . .	1,595	31	232	900	10	17	27	75	26	189	62	3,164
Greece . . .	376	2	35	21	7,444	12	11	7	21	17	133	8,079
Italy . . .	1,980	15	169	98	38	8,997	52	63	62	100	148	11,722
Malta . . .	617	1	91	24	5	13	1,731	16	1	10	30	2,539
Netherlands . . .	1,874	14	209	91	2	11	26	1,412	11	44	103	3,797
Yugoslavia . . .	610	16	109	143	92	116	20	47	2,458	121	32	3,764
Other European . . .	1,669	42	288	323	49	59	19	89	105	2,057	178	4,878
Other and unspecified	2,011	55	382	75	181	61	27	88	10	112	3,348	6,350
<b>Total mothers</b>	<b>170,527</b>	<b>1,500</b>	<b>17,635</b>	<b>3,124</b>	<b>7,972</b>	<b>9,727</b>	<b>2,310</b>	<b>3,291</b>	<b>2,804</b>	<b>3,514</b>	<b>5,785</b>	<b>228,189</b>

**Confinements—age, duration of marriage and issue of mothers**

The total number of nuptial confinements resulting in live births in 1969 was 228,189, comprising 225,730 single births, 2,434 cases of twins, 22 cases of triplets, and three cases of quadruplets. The following tables relating to previous issue exclude the issue of former marriages and stillborn children. On the other hand, they include in some States children by the same father who were born to the mother prior to the marriage. Children born at the present confinement are included in the total issue shown.

The following table shows that in 1969 the average size of family increased fairly regularly with the duration of marriage. The average issue of married mothers who bore children in 1969 was 2.30, compared with 2.34 in 1968, 2.38 in 1967, 2.42 in 1966, and 2.48 in 1965.

**NUPTIAL CONFINEMENTS BY DURATION OF MARRIAGE, AND AVERAGE ISSUE OF  
MOTHERS: AUSTRALIA, 1969**

Duration of marriage	Total nuptial confinements	Average issue of mother	Duration of marriage	Total nuptial confinements	Average issue of mother
Under 1 year . . .	32,344	1.03	15 years . . . . .	2,051	4.99
1 year . . . . .	26,846	1.25	16 " . . . . .	1,645	5.20
2 years . . . . .	28,966	1.58	17 " . . . . .	1,384	5.35
3 " . . . . .	27,241	1.85	18 " . . . . .	1,100	5.68
4 " . . . . .	22,530	2.13	19 " . . . . .	811	5.99
5 " . . . . .	17,846	2.48	20 " . . . . .	614	6.08
6 " . . . . .	14,326	2.77	21 " . . . . .	431	6.39
7 " . . . . .	11,354	3.06	22 " . . . . .	322	6.52
8 " . . . . .	9,345	3.32	23 " . . . . .	177	6.94
9 " . . . . .	7,612	3.58	24 " . . . . .	86	6.70
10 " . . . . .	5,985	3.84	25 years and over . . .	122	7.75
11 " . . . . .	4,727	4.03	Not stated . . . . .	576	3.64
12 " . . . . .	3,969	4.25			
13 " . . . . .	3,205	4.53			
14 " . . . . .	2,574	4.77			
			<b>Total . . . . .</b>	<b>228,189</b>	<b>2.30</b>

**NUPTIAL CONFINEMENTS, BY AGE OF MOTHER AND PREVIOUS ISSUE  
AUSTRALIA, 1969**

		Age of mother (years)							Total married mothers	
		Under 20	20-24	25-29	30-34	35-39	40-44	45 and over		Not stated
Previous issue										
0	. . . . .	15,272	42,797	20,567	4,929	1,626	430	25	4	85,650
1	. . . . .	3,081	27,203	25,508	8,061	2,217	421	26	2	66,519
2	. . . . .	286	8,214	17,279	9,571	2,893	605	36	5	38,889
3	. . . . .	22	1,913	6,932	6,658	2,892	660	51	1	19,129
4	. . . . .	4	380	2,343	3,366	2,028	626	46	..	8,793
5	. . . . .	..	78	795	1,621	1,349	477	37	1	4,358
6	. . . . .	..	14	251	765	780	324	39	1	2,174
7	. . . . .	..	2	91	366	476	227	20	..	1,182
8	. . . . .	..	..	27	155	301	170	29	..	682
9	. . . . .	..	..	4	71	179	107	13	..	374
10 and over	. . . . .	..	..	3	49	184	175	27	1	439
Total married mothers . . . . .		18,665	80,601	73,800	35,612	14,925	4,222	349	15	228,189

**Multiple births—previous issue of mothers**

Of married mothers of twins in 1969, 761 had no previous issue either living or dead, 702 had one child previously, 485 had two previous issue, 240 three, 134 four, 64 five, 24 six, 19 seven, 6 eight, 13 nine, 3 ten, 3 eleven, 3 twelve, 1 thirteen, and 1 fourteen. Of the 22 cases of nuptial triplets, and three cases of quadruplets registered during 1969, 10 mothers had no previous issue, 7 had one, 5 had two, 2 had three, and 1 had four previous issue.

**Nuptial first births**

The following table shows the number of nuptial first births classified by grouped ages of mothers and grouped durations of marriage of mothers.

**NUPTIAL FIRST BIRTHS, BY AGE OF MOTHER AND DURATION OF MARRIAGE  
AUSTRALIA, 1969**

Age of mother (years)										
Duration of marriage		Under 20	20-24	25-29	30-34	35-39	40-44	45 and over	Not stated	Total
Under 8 months		11,254	8,753	1,211	348	130	30	3	..	21,729
8 months		426	946	282	85	39	6	..	..	1,784
9	"	486	1,840	601	188	52	12	1	..	3,180
10	"	441	1,643	459	164	42	11	..	..	2,760
11	"	357	1,408	410	111	42	12	..	1	2,341
Total under 1 year		12,964	14,590	2,963	896	305	71	4	1	31,794
1 year and under	2 years	1,872	13,278	4,120	1,052	347	110	7	..	20,786
2 years	"	315	8,581	3,839	717	226	52	1	1	13,732
3	"	37	4,305	3,627	442	129	47	2	..	8,589
4	"	6	1,488	2,716	364	107	21	2	..	4,704
5	"	..	515	3,228	1,054	217	41	5	..	5,060
10	"	..	..	62	380	179	26	1	..	648
15 years and over	"	..	..	..	17	109	57	2	..	185
Not stated		78	40	12	7	7	5	1	2	152
Total		15,272	42,797	20,567	4,929	1,626	430	25	4	85,650

The following table provides a comparison between the numbers of nuptial first births and subsequent births in periods since 1911 and shows also the proportion of first to total nuptial confinements.

NUPTIAL FIRST BIRTHS AND SUBSEQUENT BIRTHS(a)  
AUSTRALIA, 1911 TO 1969

Period	Nuptial confinements		Total	Proportion of first to total nuptial confinements (per cent)
	First births	Other births		
Annual average—				
1911-20 . . . . .	33,595	88,997	122,592	27.40
1921-30 . . . . .	38,120	88,086	126,206	30.20
1931-40 . . . . .	39,243	71,136	110,379	35.55
1941-50 . . . . .	58,818	96,994	155,812	37.75
1951-60 . . . . .	64,379	136,264	200,643	32.09
Annual total—				
1965 . . . . .	70,197	134,941	205,138	34.22
1966 . . . . .	73,462	130,499	203,961	36.02
1967 . . . . .	76,127	133,302	209,429	36.35
1968 . . . . .	81,341	138,124	219,465	37.06
1969 . . . . .	85,650	142,539	228,189	37.53

(a) Excludes particulars of full-blood Aborigines before 1967.

### Stillbirths

Interstate comparison of the figures and rates in the following tables are affected by the differences in the definitions adopted by the various States and only the trends in the rates for each State should be compared. Beginning in 1964, steps were taken to amend the States' registration laws and so make uniform the criteria whereby stillbirths are registered. The amended legislation provides for all foetal deaths of at least twenty weeks' gestation (or 400 grammes weight) to be registered. The dates on which the legislation came into effect for each State are as follows: New South Wales, January 1969; Victoria, May 1971; Queensland, October 1967; South Australia, January 1968; Western Australia, January 1968; Tasmania, March 1967; Northern Territory, September 1964; Australian Capital Territory, September 1969. Prior to these dates the statistics of stillbirths shown relate to those in several States of at least seven months gestation and in other States to those of at least twenty-eight weeks' gestation. So as to preserve as much comparability as possible with figures for earlier years the figures shown for each State since the amended legislation relate to stillbirths of at least twenty-eight weeks' gestation.

STILLBIRTHS(a): STATES AND TERRITORIES, 1946 TO 1969

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1946-50 . . . . .	1,405	949	626	368	274	161	n.a.	12	(b)3,795
1951-55 . . . . .	1,239	849	581	290	271	139	8	16	3,393
1956-60 . . . . .	1,253	839	558	274	235	109	6	19	3,293
1961-65 . . . . .	1,104	794	468	264	194	87	17	18	2,946
Annual total—									
1965 . . . . .	947	747	391	256	181	89	15	23	2,649
1966 . . . . .	964	762	405	237	168	111	11	31	2,689
1967 . . . . .	863	797	372	211	188	83	(c)49	24	2,587
1968 . . . . .	806	734	365	217	183	79	(c)39	26	2,449
1969 . . . . .	857	761	350	208	203	79	(c)35	26	2,519

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Excludes Northern Territory. (c) Includes 25 foetal deaths in 1967 and 13 foetal deaths in both 1968 and 1969 occurring in remote localities for which the period of gestation was not stated. The Registration Ordinance requires registration of any foetal death of at least twenty weeks' gestation.



## PROPORTION OF STILLBIRTHS(a): STATES AND TERRITORIES, 1946 TO 1969

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average annual rate—									
1946-50 . . .	20.0	19.6	21.9	22.1	20.5	22.3	n.a.	16.3 (b)	20.46
1951-55 . . .	16.5	15.5	18.4	15.8	17.0	17.5	17.2	17.1	16.57
1956-60 . . .	15.5	13.5	16.1	13.5	13.7	12.6	8.6	14.3	14.59
1961-65 . . .	13.1	12.0	13.1	12.2	11.4	10.2	18.4	9.3	12.49
Annual rate—									
1965 . . .	12.0	11.6	11.5	12.1	11.1	11.7	(c)	10.5	11.75
1966 . . .	12.2	11.8	12.2	11.5	9.8	14.8	(c)	13.2	11.93
1967 . . .	10.8	12.0	10.6	10.2	10.3	10.9	24.9	9.9	11.16
1968 . . .	9.8	10.3	10.3	10.1	9.3	9.4	18.4	9.7	10.11
1969 . . .	9.9	10.6	9.5	9.4	9.7	9.3	15.2	8.4	9.97

(a) Numbers of stillbirths per 1,000 of all births (live and still). Excludes particulars of full-blood Aborigines before 1967. (b) Excludes Northern Territory. (c) Less than twenty events; rates not calculated.

NOTE. Because of the smallness of the numbers of stillbirths occurring in the Australian Capital Territory and the Northern Territory the rates for these Territories are subject to considerable fluctuation.

## Mortality

## Number of deaths

The following tables show the number of deaths, male and female, registered in each State and Territory during 1970. Stillbirths, although registered as both births and deaths in some States are excluded from the death statistics.

## DEATHS: STATES AND TERRITORIES, 1970

Sex	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Males . . .	24,123	16,472	9,762	5,576	4,392	1,785	364	354	62,828
Females . . .	19,478	13,863	7,293	4,562	3,151	1,389	244	240	50,220
Persons . . .	43,601	30,335	17,055	10,138	7,543	3,174	608	594	113,048

NOTE. Annual averages for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 597.

## DEATHS(a): STATES AND TERRITORIES, 1946 TO 1970

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Annual average—									
1946-50(b) . . .	29,552	21,827	10,357	6,507	4,802	2,459	76	103	75,683
1951-55 . . .	32,135	22,900	11,187	7,182	5,263	2,576	109	131	81,483
1956-60 . . .	34,002	24,254	12,008	7,732	5,523	2,668	117	184	86,488
1961-65 . . .	37,514	26,569	13,570	8,388	6,043	2,939	152	290	95,465
1966-70 . . .	41,249	29,265	15,711	9,562	7,208	3,231	540	497	107,263
Annual total—									
1967 . . .	39,613	28,373	14,736	9,071	6,779	3,228	527	376	102,703
1968 . . .	41,803	29,967	16,078	9,916	7,468	3,284	543	488	109,547
1969 . . .	40,665	28,976	15,786	9,337	7,350	3,309	485	588	106,496
1970 . . .	43,601	30,335	17,055	10,138	7,543	3,174	608	594	113,048

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September 1939 to June 1947.

### Crude death rates

The simplest method of measuring mortality is to relate the number of deaths for a given period to the mean population for that period, which gives the crude death rate. This rate for a given period measures the number per thousand of population by which the population is depleted through deaths during that period.

#### CRUDE DEATH RATES(a): STATES AND TERRITORIES, 1946 TO 1970

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Average annual rate—									
1946–50(b)	9.70	10.37	9.13	9.76	9.23	9.30	6.27	5.31	9.74
1951–55	9.49	9.55	8.71	9.25	8.49	8.48	6.86	4.58	9.25
1956–60	9.20	8.91	8.36	8.62	7.90	7.97	5.32	4.31	8.78
1961–65	9.27	8.73	8.63	8.28	7.78	8.15	4.95	3.94	8.75
1966–70	9.38	8.78	9.05	8.47	7.89	8.45	8.42	4.37	8.89
Annual rate—									
1967	9.19	8.66	8.65	8.16	7.73	8.57	8.83	3.62	8.69
1968	9.53	9.01	9.27	8.81	8.21	8.59	8.45	4.33	9.10
1969	9.08	8.55	8.92	8.15	7.76	8.51	7.11	4.81	8.65
1970—									
Males	10.50	9.51	10.70	9.52	8.78	9.00	9.40	5.14	9.92
Females	8.55	8.07	8.20	7.87	6.53	7.14	7.36	3.72	8.05
Persons	9.53	8.79	9.47	8.70	7.67	8.08	8.47	4.45	8.99

(a) Number of deaths per 1,000 of mean population. Excludes particulars of full-blood Aborigines before 1967.  
 (b) Excludes deaths of defence personnel, etc., from September 1939 to June 1947.

NOTE. Crude death rates (i.e. the number of deaths per thousand of mean population) are affected by the particular age and sex composition of the population. In the Australian Capital Territory and the Northern Territory the population at risk in the higher ages is lower proportionately than in other States, largely as a result of the rapid increases of the population in the lower ages.

A graph showing the crude death rate for each year from 1870 to 1970 is shown on plate 20 page 159.

### Standardised death rates

The death rates quoted above are crude rates, i.e. they simply show the number of deaths per thousand of mean population without taking into consideration differences in the sex and age composition of the population. Other conditions being equal, however, the crude death rate of a community will be low if it contains a large proportion of young people, and conversely it will be relatively high if the population includes a large proportion of elderly people. The foregoing table of crude death rates, therefore, does not indicate comparative incidence of mortality either as between States in the same year or in any one State over a period of years. In order to obtain a comparison of mortality rates on a uniform basis as far as sex and age constitution are concerned, 'standardised' death rates may be computed. For a description of the method used, and a table showing standardised death rates as compared with crude death rates as at Census dates from 1921 to 1966 see Year Book No. 55, page 184.

### True death rates

The main objections to standardised death rates are that the choice of a standard population is arbitrary and that the standardised rates have little value except for comparative purposes, and even then variation of the standard population may make appreciable differences. However, a correct measurement of the mortality of the population can be obtained from life tables. A life table represents the number of survivors at each age from a group of newly-born children who are subject to given mortality conditions, and from such a table the complete expectation of life at birth can be calculated. The reciprocal of this figure is known as the true death rate, since, if the complete expectation of life of a person at birth is fifty years, say, then each person will on the average die

fifty years after birth, so that in a stationary population one person in fifty or twenty per thousand, will die each year. The true death rate for a given period is unaffected by the particular age distribution of that period and is determined solely by the mortality experience of the period as manifested in the rate of survival from each year of age to the next. The table below sets out true death rates for the periods covered by Australian life tables together with estimates for recent years based on abridged life tables calculated by the Commonwealth Statistician. These estimates are subject to revision when the Australian life tables 1965-1967 become available.

**TRUE DEATH RATES: AUSTRALIA**  
**1881-90 TO 1969(a)**

<i>Period</i>	<i>True death rate</i>	
	<i>Males(b)</i>	<i>Females(c)</i>
1881-90 . . .	21.19	19.67
1891-1900 . . .	19.58	18.26
1901-10 . . .	18.12	17.00
1920-22 . . .	16.91	15.80
1932-34 . . .	15.75	14.89
1946-48 . . .	15.14	14.16
1953-55 . . .	14.89	13.75
1960-62 . . .	14.72	13.48
1965(d) . . .	14.77	13.48
1966(d) . . .	14.80	13.51
1967(d) . . .	14.76	13.43
1968(d) . . .	14.83	13.50
1969(d) . . .	14.81	13.41

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Number of deaths per 1,000 males in stationary population. (c) Number of deaths per 1,000 females in stationary population. (d) Based on abridged life tables calculated by the Commonwealth Statistician. These tables are based on estimates of population by age, adjusted to take into account the 1966 census.

The crude death rates and the true death rates of Australia and the more populous countries of the world for the latest available year are shown in the table in *International Vital Statistics* at the end of this chapter.

#### Australian Life Tables

*Life Tables prior to 1961.* It has been the practice at each census from 1911 onwards to prepare Life Tables representative of the mortality experience of Australia. The mortality of the Australian population for the thirty years from 1881 to 1910 inclusive was investigated in 1911 by the Commonwealth Statistician. Tables were compiled for each State and for Australia as a whole in respect of each sex for each of the decennial periods 1881-90, 1891-1900 and 1901-10. These compilations furnished a comprehensive view of Australian mortality in respect of sex, time, and geographical distribution, and practically superseded all Life Tables prepared in Australia prior to 1911. In addition, mortality tables based on the experience for the whole of Australia for the ten years 1901-10 were prepared and published. At the census of 1921 Life Tables were prepared by the Commonwealth Statistician from the recorded census population and the deaths in the three years 1920 to 1922. In 1933, 1947 and 1954, Life Tables based on the census population and the deaths in the years 1932 to 1934, 1946 to 1948 and 1953 to 1955 respectively were compiled by the Commonwealth Actuary.



*Life Tables of Census of 1961.* On the occasion of the 1961 Census the eighth Life Tables in the series were compiled by the Commonwealth Actuary. These were based on the population recorded at the census, adjusted to allow for variation in the net movement into Australia over the years 1960 to 1962, and deaths during these years. Full particulars of the data used, the method of construction and the tabulation of these Life Tables will be found in the report of the Commonwealth Actuary, which was published by the Commonwealth Statistician in 1966. This report also appears in Volume VIII of the detailed tables of the 1961 census. The main features of the tables, including comparisons with earlier Australian tables, are set out in the Year Book No. 55, pages 186 and 187. The table most frequently used by the general reader is that relating to expectation of life, and is published below.

COMPLETE EXPECTATION OF LIFE ( $e_x^0$ ) AT SELECTED AGES

Age (x)	Males				Females			
	1901-10	1946-48	1953-55	1960-62	1901-10	1946-48	1953-55	1960-62
0	55.20	66.07	67.14	67.92	58.84	70.63	72.75	74.18
10	53.53	59.04	59.53	59.93	56.38	63.11	64.78	65.92
20	44.74	49.64	50.10	50.40	47.52	53.47	55.06	56.16
30	36.52	40.40	40.90	41.12	39.33	44.08	45.43	46.49
40	28.56	31.23	31.65	31.84	31.47	34.91	35.99	36.99
50	21.16	22.67	22.92	23.13	23.69	26.14	27.03	27.92
60	14.35	15.36	15.47	15.60	16.20	18.11	18.78	19.51
70	8.67	9.55	9.59	9.77	9.96	11.14	11.62	12.19
80	4.96	5.36	5.47	5.57	5.73	6.02	6.30	6.68

NOTE.  $e_x^0$  = complete expectation of life at specified ages.

The progress towards lower mortality rates for both males and females has continued over the past sixty years or more. For example, the probability of a child born in 1961 dying in one year is less than one-quarter of the probability of death in one year attached to the child who was born sixty years ago. Even at advanced ages, the reductions which have occurred in mortality rates as compared with sixty years ago are very substantial. With the exception of males of ages forty to forty-seven and ages sixty-two to sixty-six lower mortality rates were experienced by males and females during 1960 to 1962 than for the period 1953 to 1955. There is evidence that female longevity continues to increase at a faster rate than male longevity.

#### Age distribution at death

Age at death is recorded for statistical purposes in days for the first week of life, in weeks for the first four weeks, in months for the first year and in completed years of life thereafter. These ages are usually combined in groups for publication, the most common being weeks for the first four weeks, months or groups of months for the first year, single years of age for the first five years, and thereafter the five-year groups 5-9 years, 10-14 years, etc. A summary in this form for the year 1969 is given for Australia in the following table.

## DEATHS, BY AGE AT DEATH AND SEX: AUSTRALIA, 1969

<i>Age at death</i>	<i>Males</i>	<i>Fe- males</i>	<i>Per- sons</i>	<i>Age at death</i>	<i>Males</i>	<i>Fe- males</i>	<i>Per- sons</i>
Under 1 week . . . . .	1,724	1,182	2,906	5- 9 years . . . . .	303	215	518
1 week and under 2 weeks . . . . .	95	60	155	10-14 " . . . . .	285	142	427
2 weeks and under 3 weeks . . . . .	58	52	110	15-19 " . . . . .	736	310	1,046
3 weeks and under 4 weeks . . . . .	48	21	69	20-24 " . . . . .	903	274	1,177
<i>Total under 4 weeks . . . . .</i>	<i>1,925</i>	<i>1,315</i>	<i>3,240</i>	25-29 " . . . . .	645	274	919
4 weeks and under 3 months . . . . .	228	179	407	30-34 " . . . . .	636	287	923
3 months and under 6 months . . . . .	227	205	432	35-39 " . . . . .	896	487	1,383
6 months and under 12 months . . . . .	204	199	403	40-44 " . . . . .	1,531	850	2,381
<i>Total under 1 year . . . . .</i>	<i>2,584</i>	<i>1,898</i>	<i>4,482</i>	45-49 " . . . . .	2,468	1,302	3,770
1 year . . . . .	189	163	352	50-54 " . . . . .	3,256	1,868	5,124
2 years . . . . .	97	93	190	55-59 " . . . . .	5,032	2,466	7,498
3 " . . . . .	78	76	154	60-64 " . . . . .	6,408	3,184	9,592
4 " . . . . .	84	57	141	65-69 " . . . . .	7,618	4,392	12,010
<i>Total under 5 years . . . . .</i>	<i>3,032</i>	<i>2,287</i>	<i>5,319</i>	70-74 " . . . . .	7,581	5,761	13,342
				75-79 " . . . . .	7,904	7,645	15,549
				80-84 " . . . . .	5,904	7,261	13,165
				85 years and over . . . . .	4,532	7,799	12,331
				Age not stated . . . . .	16	6	22
				<i>Total all ages . . . . .</i>	<i>59,686</i>	<i>46,810</i>	<i>106,496</i>

There are different mortality rates at various stages of life, and the actual number of deaths in any period is related to the numbers living at the respective stages. Changes in the number of deaths from one period to another are associated with changes in the rate of mortality in the various age groups and by the changed proportions of persons living in the different groups. The combined effect of various influences, i.e. the decline in the rate of mortality, the long term decline in the birthrate, and the effects of past and present migration on the age distribution of the population, is shown in the following table, which shows the proportion of deaths in various age groups in ten-year periods from 1901 to 1960 and for the year 1969.

## PROPORTION OF DEATHS IN EACH AGE GROUP: AUSTRALIA, 1901 TO 1969(a)

(Per cent)

<i>Age at death (years)</i>							<i>1969</i>		
	<i>1901-10</i>	<i>1911-20</i>	<i>1921-30</i>	<i>1931-40</i>	<i>1941-50</i>	<i>1951-60</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
Under 1 year	20.51	16.66	13.09	7.40	6.79	5.59	4.33	4.05	4.21
1- 4 . . . . .	6.45	6.09	4.51	2.56	1.71	1.33	0.75	0.83	0.79
5-14 . . . . .	3.71	3.47	3.00	2.29	1.34	1.04	0.99	0.76	0.89
15-24 . . . . .	6.22	5.10	4.33	3.61	2.09	1.71	2.75	1.25	2.09
25-34 . . . . .	7.31	7.40	5.92	4.49	2.87	2.30	2.15	1.20	1.73
35-44 . . . . .	8.39	8.02	7.72	6.25	4.52	4.00	4.07	2.86	3.53
45-54 . . . . .	9.29	10.34	9.99	10.34	9.15	8.29	9.59	6.77	8.35
55-64 . . . . .	9.74	12.12	14.82	15.11	16.67	15.81	19.17	12.07	16.05
65-74 . . . . .	13.39	13.51	17.85	22.53	23.09	25.47	25.46	21.69	23.81
75 and over . . . . .	14.99	17.29	18.77	25.42	31.77	34.46	30.75	48.52	38.56
<i>Total . . . . .</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>	<i>100.00</i>

(a) Excludes particulars of full-blood Aborigines before 1967.

A table showing these proportions for males and females separately for the period 1901 to 1950 was published in Year Book No. 39, page 614.

### Age-specific death rates

In previous issues of the Year Book, average annual age-specific death rates, i.e. the average number of deaths per 1,000 of population in each age group, were given for each State and Australia for the periods 1932-1934, 1946-1948, 1953-1955, 1960-1962, and 1965-1967 (*see* Year Books, No. 37, pp. 778-9, No. 39, pp. 615-6, No. 44, pp. 640-1, No. 52, p. 253, and No. 55, p. 189). These rates were based on the age distribution of the population at the relevant censuses.

### AGE-SPECIFIC DEATH RATES(a): STATES, 1969

Age group (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(b)
MALES							
Under 1(c)	21.4	16.6	21.8	18.2	23.6	18.9	20.1
1-4	0.8	1.0	1.2	1.0	1.2	0.9	0.9
5-9	0.4	0.5	0.6	0.5	0.4	0.9	0.5
10-14	0.4	0.5	0.5	0.5	0.5	0.5	0.5
15-19	1.3	1.3	1.5	1.0	1.3	1.4	1.3
20-24	1.6	1.8	1.6	1.1	2.0	2.2	1.7
25-29	1.5	1.4	1.6	1.2	1.6	1.8	1.5
30-34	1.6	1.3	1.8	1.6	2.3	2.4	1.6
35-39	2.2	2.1	3.1	2.0	2.7	2.8	2.4
40-44	4.0	3.7	3.5	3.2	3.6	3.9	3.7
45-49	7.0	5.8	7.3	5.5	5.5	6.1	6.4
50-54	10.6	9.6	11.5	8.8	9.8	10.4	10.2
55-59	17.8	16.5	17.1	15.8	14.4	16.1	16.9
60-64	28.9	25.7	26.0	25.2	28.0	23.8	27.1
65-69	46.5	43.8	42.9	41.1	42.8	45.5	44.4
70-74	65.8	63.6	60.0	61.6	61.0	62.6	63.5
75-79	102.2	105.4	94.8	95.6	103.2	117.0	101.8
80-84	147.4	140.0	133.7	133.0	131.4	142.8	140.6
85 and over	252.7	252.1	237.0	261.1	257.9	274.4	251.9
FEMALES							
Under 1(c)	16.3	13.4	15.9	13.3	20.0	13.9	15.6
1-4	0.8	0.8	0.9	0.8	1.0	0.9	0.9
5-9	0.3	0.4	0.4	0.5	0.2	0.2	0.4
10-14	0.2	0.3	0.3	0.3	0.2	0.2	0.3
15-19	0.5	0.6	0.7	0.5	0.5	0.8	0.6
20-24	0.6	0.5	0.4	0.4	0.6	0.6	0.5
25-29	0.8	0.7	0.7	0.5	0.7	0.6	0.7
30-34	0.8	0.7	1.0	0.7	0.9	1.1	0.8
35-39	1.4	1.1	1.8	1.5	1.3	1.4	1.4
40-44	2.3	2.0	2.8	2.0	1.8	2.2	2.2
45-49	3.7	3.1	4.3	2.6	3.6	3.8	3.5
50-54	6.2	5.6	6.3	4.4	5.5	6.2	5.8
55-59	9.0	8.0	8.1	7.7	7.1	7.4	8.3
60-64	14.0	13.0	12.9	11.5	12.0	14.6	13.2
65-69	22.9	21.6	21.3	20.7	22.1	24.3	22.2
70-74	36.5	34.4	32.2	31.2	35.1	33.7	34.7
75-79	61.7	62.3	59.9	59.2	59.2	64.6	61.4
80-84	101.4	99.5	91.9	96.8	95.3	88.4	98.5
85 and over	207.5	207.5	189.4	182.0	184.5	231.0	201.5

(a) Number of deaths per 1,000 of population in each age group at 30 June 1969. (b) Includes the Australian Capital Territory and the Northern Territory. (c) Infant deaths per 1,000 live births registered.



## AGE-SPECIFIC DEATH RATES(a): AUSTRALIA, 1920-22 TO 1969

Age group (years)	1920-22 (b)	1932-34 (b)	1946-48 (b)	1953-55 (b)	1960-62 (b)	1965-67 (b)(c)	1967	1968	1969
MALES									
Under 1(d)	70.1	46.0	31.7	25.2	22.4	20.3	20.6	19.8	20.1
1-4	7.1	4.1	2.0	1.7	1.2	1.0	1.0	0.9	0.9
5-9	2.0	1.5	0.9	0.7	0.5	0.4	0.4	0.5	0.5
10-14	1.6	1.2	0.8	0.6	0.5	0.5	0.4	0.5	0.5
15-19	2.3	1.8	1.4	1.5	1.2	1.3	1.3	1.5	1.3
20-24	3.1	2.4	1.7	1.8	1.6	1.7	1.7	1.8	1.7
25-29	3.7	2.5	1.7	1.7	1.5	1.5	1.5	1.4	1.5
30-34	4.2	2.9	2.0	1.8	1.7	1.6	1.6	1.6	1.6
35-39	5.4	3.9	2.7	2.4	2.3	2.4	2.3	2.4	2.4
40-44	6.9	5.2	4.1	3.6	3.7	3.8	3.9	3.7	3.7
45-49	9.8	7.8	6.9	6.0	6.0	6.1	6.3	6.1	6.4
50-54	13.1	11.5	11.3	10.4	10.0	10.4	10.1	10.6	10.2
55-59	18.9	17.5	17.7	16.9	16.6	16.9	17.1	17.3	16.9
60-64	28.7	26.4	27.4	26.6	26.4	27.5	27.3	28.6	27.1
65-69	42.9	40.2	42.5	41.3	41.7	43.5	43.7	44.5	44.4
70-74	64.6	61.2	63.4	64.6	63.0	66.7	65.8	67.2	63.5
75-79	105.8	98.5	100.0	98.2	94.6	99.6	97.6	104.0	101.8
80-84	162.7	158.2	148.9	145.9	142.4	145.7	145.3	159.3	140.6
85 and over	284.0	252.5	257.4	250.6	243.4	240.7	230.9	272.4	251.9
FEMALES									
Under 1(d)	54.5	36.7	25.0	19.9	17.6	15.8	15.8	15.6	15.6
1-4	6.2	3.5	1.7	1.4	1.0	0.8	0.8	0.9	0.9
5-9	1.8	1.2	0.6	0.5	0.4	0.3	0.3	0.4	0.4
10-14	1.3	0.9	0.5	0.4	0.3	0.3	0.2	0.3	0.3
15-19	1.9	1.4	0.7	0.6	0.5	0.5	0.5	0.6	0.6
20-24	2.8	2.1	1.1	0.7	0.6	0.6	0.6	0.6	0.5
25-29	3.6	2.6	1.5	0.8	0.7	0.7	0.7	0.6	0.7
30-34	4.1	2.9	1.8	1.1	1.0	1.0	0.9	1.0	0.8
35-39	5.0	3.8	2.4	1.7	1.5	1.5	1.3	1.5	1.4
40-44	5.5	4.3	3.3	2.6	2.3	2.3	2.4	2.4	2.2
45-49	6.8	6.1	4.9	4.2	3.7	3.8	3.8	3.7	3.5
50-54	9.3	8.6	7.6	6.4	5.5	5.8	5.9	5.7	5.8
55-59	12.8	11.5	10.5	9.2	8.1	8.6	8.6	8.7	8.3
60-64	19.1	18.0	16.5	14.8	13.3	13.5	13.5	13.8	13.2
65-69	31.2	29.3	26.2	23.9	22.1	21.8	21.1	22.4	22.2
70-74	50.3	46.9	45.7	40.8	37.0	37.2	36.4	36.5	34.7
75-79	86.9	77.0	75.3	69.5	63.1	62.4	60.5	64.5	61.4
80-84	139.6	126.8	123.0	117.1	105.5	107.7	104.3	108.4	98.5
85 and over	247.5	227.4	223.2	214.0	210.3	197.4	195.2	224.0	201.5

(a) Number of deaths per 1,000 of population of the same age group and sex. The populations used in the calculation of these rates are based on census populations at 4 April 1921 and 30 June 1933, 1947, 1954, 1961 and 1966, and the estimated populations at 30 June 1967, 1968 and 1969. (b) Average annual rate per 1,000 of census population, based on deaths in the three year period, i.e. census year and the years preceding and following it. Full-blood Aborigines are excluded. (c) For purposes of comparison with earlier periods for which full-blood Aborigines are excluded, and because published figures for 1965 and 1966 exclude Aborigines, the figures for the 1967 component have been adjusted to exclude full-blood Aborigines. (d) Infant deaths per 1,000 live births registered.

**Infant deaths and death rates—States and Territories**

The next table shows for each State and Territory for the period 1946 to 1970, the number of deaths under one year of age and the rates of infant mortality under one year. Rates for Australia and the more populous countries of the world for the latest available year are shown in the table International Vital Statistics at the end of this Chapter.

**INFANT MORTALITY UNDER ONE YEAR(a): STATES AND TERRITORIES, 1946 TO 1970**

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Annual average—</b>									
1946-50 . . . . .	1,990	1,129	770	431	370	187	11	14	4,902
1951-55 . . . . .	1,852	1,113	730	407	384	184	17	14	4,701
1956-60 . . . . .	1,770	1,205	717	410	362	176	25	18	4,683
1961-65 . . . . .	1,685	1,168	696	407	350	156	28	34	4,524
1966-70 . . . . .	1,567	1,071	669	354	393	127	117	51	4,349
<b>Annual total—</b>									
1967 . . . . .	1,452	1,101	678	346	314	130	122	44	4,187
1968 . . . . .	1,525	1,010	716	345	398	143	101	45	4,283
1969 . . . . .	1,625	1,066	691	347	453	139	103	58	4,482
1970 . . . . .	1,743	1,060	672	367	459	116	126	61	4,604
<b>Annual average rate(b)—</b>									
1946-50 . . . . .	28.9	23.8	27.5	26.5	28.1	26.5	37.4	19.9	26.98
1951-55 . . . . .	25.1	20.7	23.6	22.6	24.4	23.7	36.3	15.4	23.34
1956-60 . . . . .	22.2	19.7	21.0	20.5	21.4	20.6	36.0	13.7	21.05
1961-65 . . . . .	20.3	17.9	19.7	19.0	20.8	18.5	31.2	17.6	19.42
1966-70 . . . . .	19.0	15.6	18.9	16.6	20.3	15.9	54.9	18.3	18.1
<b>Annual rate(b)—</b>									
1967 . . . . .	18.4	16.8	19.5	17.0	17.4	17.2	63.5	18.3	18.26
1968 . . . . .	18.7	14.4	20.3	16.3	20.4	17.2	48.5	17.0	17.78
1969 . . . . .	18.9	15.0	18.9	15.8	21.8	16.5	48.3	18.8	17.92
1970 . . . . .	19.7	14.5	17.9	16.2	21.2	14.3	48.4	17.6	17.89

(a) Excludes particulars of full-blood Aborigines before 1966.  
year per 1,000 live births registered.

(b) Number of deaths of children aged under one

Because of the smallness of the numbers of these deaths occurring in the Australian Capital Territory and the Northern Territory, the rates for these Territories (i.e. number of such deaths per thousand live births) are subject to considerable fluctuation.

**Infant deaths and death rates—Australia**

The fact that out of 599,717 male infants born from 1965 to 1969, 12,288 (20.49 per 1,000) died during the first year of life, while of 568,371 female infants only 9,111 (16.03 per 1,000) died during the first year, accords with the universal experience that during the first few years of life the higher death rate of male infants tends to counteract the excess of male births. Stillbirths, for which masculinity is also higher, are not included in any of the tables relating to deaths.

As shown by the following table, the disparity is greater during the first four weeks of life, termed the neonatal period, than during the remainder of the first year of life, or the post-neonatal period.

## INFANT DEATHS AND MORTALITY RATES(a): AUSTRALIA, 1941 TO 1969

Period	Age at death											Total under one year		
	Days		Total under one week	Weeks			Total under four weeks	Months						
	Under 1	1-6		1	2	3		1-2 (b)	3-5	6-8	9-11			
												Males	Fe- males	Per- sons
Annual average—														
1941-45 . . .	1,580	1,269	2,849	332	189	132	3,502	497	460	375	302	2,921	2,215	5,136
1946-50 . . .	1,717	1,297	3,014	259	138	103	3,514	404	415	318	251	2,808	2,094	4,902
1951-55 . . .	1,631	1,250	2,881	237	109	86	3,313	396	431	316	245	2,683	2,018	4,701
1956-60 . . .	1,737	1,195	2,932	221	116	84	3,353	398	457	271	204	2,662	2,021	4,683
1961-65 . . .	1,709	1,187	2,896	191	102	71	3,260	426	417	245	176	2,596	1,928	4,524
Annual total—														
1965 . . .	1,544	1,067	2,611	164	103	69	2,947	372	389	244	165	2,357	1,760	4,117
1966 . . .	1,511	1,107	2,618	165	77	67	2,927	362	394	213	149	2,328	1,717	4,045
1967 . . .	1,572	1,144	2,716	169	91	77	3,053	385	390	215	144	2,421	1,766	4,187
1968 . . .	1,768	1,050	2,818	146	70	72	3,106	408	394	221	154	2,452	1,831	4,283
1969 . . .	1,755	1,151	2,906	155	110	69	3,240	407	432	241	162	2,584	1,898	4,482
Annual average rate(c)—														
1941-45 . . .	10.75	8.64	19.39	2.27	1.29	0.90	23.85	3.38	3.13	2.55	2.06	38.80	30.93	34.97
1946-50 . . .	9.45	7.14	16.59	1.43	0.76	0.56	19.34	2.22	2.29	1.75	1.38	30.08	23.70	26.98
1951-55 . . .	8.09	6.20	14.29	1.18	0.54	0.43	16.44	1.97	2.14	1.57	1.22	25.99	20.56	23.34
1956-60 . . .	7.81	5.37	13.18	0.99	0.52	0.38	15.07	1.79	2.06	1.22	0.92	23.29	18.69	21.05
1961-65 . . .	7.34	5.09	12.43	0.82	0.44	0.30	13.99	1.83	1.79	1.05	0.76	21.67	17.03	19.42
Annual rate(c)—														
1965 . . .	6.93	4.79	11.72	0.73	0.46	0.31	13.22	1.67	1.75	1.09	0.74	20.59	16.24	18.47
1966 . . .	6.79	4.97	11.76	0.74	0.35	0.30	13.15	1.62	1.77	0.96	0.67	20.33	15.88	18.17
1967 . . .	6.85	4.99	11.84	0.74	0.40	0.33	13.31	1.68	1.70	0.94	0.63	20.57	15.82	18.26
1968 . . .	7.34	4.36	11.70	0.60	0.29	0.30	12.89	1.69	1.64	0.92	0.64	19.83	15.61	17.78
1969 . . .	7.02	4.60	11.62	0.61	0.44	0.28	12.95	1.63	1.73	0.96	0.65	20.14	15.57	17.92

(a) Excludes particulars of full-blood Aborigines before 1967. (b) Age four weeks and under three months.  
(c) Number of deaths of children aged under one year per 1,000 live births registered.

Plate 22, on page 179 shows infant mortality rates for each year from 1910 to 1969.

### Causes of death

The classification of causes of death adopted for Australia by the Commonwealth Bureau of Census and Statistics at the inception of its mortality statistics in 1907 was that introduced by the International Institute of Statistics in 1893, reviewed by that Institute in 1899, and revised by an International Commission in 1900. This classification became known as the International List of Causes of Death, and further international revisions in 1909 (Second), 1920 (Third), 1929 (Fourth), 1938 (Fifth), 1948 (Sixth), 1955 (Seventh) and 1965 (Eighth), were successively adopted for use in Australian statistics.

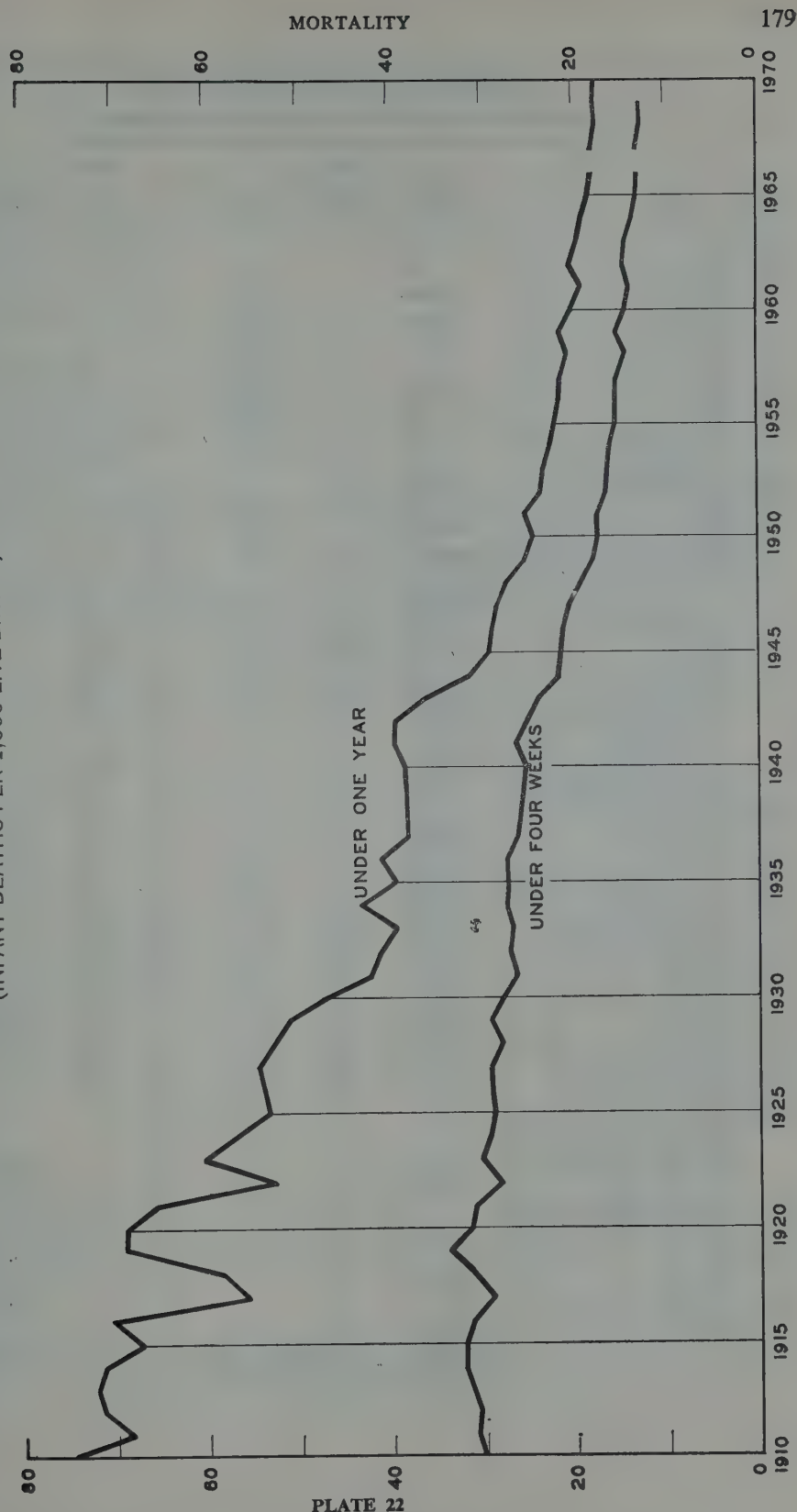
The Eighth Revision of the classification (now known as the International Classification of Diseases, Injuries and Causes of Death) was used in Australia for the first time in 1968. Hence, cause of death figures for 1968 and subsequent years are not comparable, for some causes, with figures for 1967 and earlier years.

In order to facilitate the concise presentation of cause of death statistics, the present International Classification provides two special lists of causes for tabulation—the Intermediate List of 150 causes and the Abbreviated List of 50 causes. The latter has been used as the base of the cause of death tabulations for 1969 which follow. Some categories have been sub-divided to show additional particulars of interest in Australian statistics. Table A shows the total number of males and females who died, the death rates per million of mean population, and the percentage of total deaths. Table B shows deaths for males and females, classified by age groups.



# INFANT MORTALITY RATES: AUSTRALIA 1910 TO 1970

(INFANT DEATHS PER 1,000 LIVE BIRTHS)



**A. CAUSES OF DEATH: NUMBERS, PROPORTIONS AND CRUDE RATES(a), MALES  
AND FEMALES, AUSTRALIA, 1969**

**ABBREVIATED LIST OF 50 CAUSES WITH CERTAIN SUB-DIVISIONS**

Cause of death	ICD numbers	Males			Females		
		Number of deaths	Percentage of total	Crude rates(a)	Number of deaths	Percentage of total	Crude rates(a)
B 1 Cholera . . . . .	000	..	..	..	..	..	..
B 2 Typhoid fever . . . . .	001	..	..	..	..	..	..
B 3 Bacillary dysentery and amoebiasis . . . . .	004, 006	3	(b)	(c)	4	(b)	1
B 4 Enteritis and other diarrhoeal diseases . . . . .	008, 009	163	0.3	26	181	0.4	30
B 5 Tuberculosis of respiratory system . . . . .	010-012	119	0.2	19	29	0.1	5
B 6 Other tuberculosis, including late effects . . . . .	013-019	38	0.1	6	27	0.1	4
B 7 Plague . . . . .	020	..	..	..	..	..	..
B 8 Diphtheria . . . . .	032	..	..	..	..	..	..
B 9 Whooping cough . . . . .	033	2	(b)	(c)	2	(b)	(c)
B10 Streptococcal sore throat and scarlet fever . . . . .	034	..	..	..	2	(b)	(c)
B11 Meningococcal infection . . . . .	036	17	(b)	3	9	(b)	1
B12 Acute poliomyelitis . . . . .	040-043	..	..	..	..	..	..
B13 Smallpox . . . . .	050	..	..	..	..	..	..
B14 Measles . . . . .	055	15	(b)	2	19	(b)	3
B15 Typhus and other rickettsioses . . . . .	080-083	..	..	..	..	..	..
B16 Malaria . . . . .	084	1	(b)	(c)	..	..	..
B17 Syphilis and its sequelae . . . . .	090-097	16	(b)	3	5	(b)	1
B18 All other infective and parasitic diseases . . . . .	Remainder of 000-136	..	0.2	23	123	0.3	20
B19 Malignant neoplasms—							
Digestive organs . . . . .	150-159	3,013	5.0	486	2,884	6.2	472
Lung . . . . .	162	2,654	4.4	428	383	0.8	63
Skin . . . . .	172, 173	316	0.5	51	183	0.4	30
Breast . . . . .	174	9	(b)	1	1,448	3.1	237
Genital organs . . . . .	180-187	1,039	1.7	168	1,073	2.3	176
Urinary organs . . . . .	188, 189	537	0.9	87	262	0.6	43
Leukaemia and aleukaemia . . . . .	204-207	389	0.7	63	294	0.6	48
Other malignant and lymphatic neoplasms . . . . .	Remainder of 140-209	1,705	2.9	275	1,161	2.5	190
B20 Benign neoplasms and neoplasms of unspecified nature . . . . .	210-239	100	0.2	16	99	0.2	16
B21 Diabetes mellitus . . . . .	250	761	1.3	123	996	2.1	163
B22 Avitaminoses and other nutritional deficiency . . . . .	260-269	41	0.1	7	56	0.1	9
B23 Anaemias . . . . .	280-285	94	0.2	15	133	0.3	22
B24 Meningitis . . . . .	320	49	0.1	8	52	0.1	9
B25 Active rheumatic fever . . . . .	390-392	13	(b)	2	10	(b)	2
B26 Chronic rheumatic heart disease . . . . .	393-398	749	0.7	66	512	1.1	84
B27 Hypertensive disease . . . . .	400-404	1,943	3.3	321	945	2.0	155
B28 Ischaemic heart disease . . . . .	410-414	2,067	3.5	333	2,591	5.5	424
B29 Other forms of heart disease . . . . .	420-429	6,239	10.5	1,007	8,394	17.9	1,374
B30 Cerebrovascular disease . . . . .	430-438	122	0.2	20	93	0.2	15
B31 Influenza . . . . .	470-474	1,499	2.5	242	1,167	2.5	191
B32 Pneumonia . . . . .	480-486	2,990	5.0	482	685	1.5	112
B33 Bronchitis, emphysema and asthma . . . . .	490-493	381	0.6	61	206	0.4	34
B34 Peptic ulcer . . . . .	531-533	38	0.1	6	29	0.1	5
B35 Appendicitis . . . . .	540-543	175	0.3	28	199	0.4	33
B36 Intestinal obstruction and hernia . . . . .	550-553, 560	460	0.8	74	216	0.5	35
B37 Cirrhosis of liver . . . . .	571	412	0.7	66	359	0.8	59
B38 Nephritis and nephrosis . . . . .	580-584	247	0.4	40	..	..	..
B39 Hyperplasia of prostate . . . . .	600	..	..	..	3	(b)	(c)
B40 Abortion . . . . .	640-645	..	..	..	..	..	..
B41 Other complications of pregnancy, childbirth and the puerperium. Delivery without mention of complication . . . . .	630-639, 650-678, 740-759	651	1.1	105	41	0.1	7
B42 Congenital anomalies . . . . .	764-768, 772, 776	530	0.9	86	342	0.7	56
B43 Birth injury, difficult labour and other anoxic and hypoxic conditions . . . . .	Remainder of 760-779	942	1.6	152	635	1.4	104
B44 Other causes of perinatal mortality . . . . .	780-796	358	0.6	58	338	0.7	55
B45 Symptoms and ill-defined conditions . . . . .							

For footnotes see end of table next page.

**A. CAUSES OF DEATH: NUMBERS, PROPORTIONS AND CRUDE RATES(a), MALES  
AND FEMALES, AUSTRALIA, 1969—continued**

**ABBREVIATED LIST OF 50 CAUSES WITH CERTAIN SUB-DIVISIONS—continued**

Cause of death	ICD numbers	Males			Females		
		Number of deaths	Percentage of total	Crude rates(a)	Number of deaths	Percentage of total	Crude rates(a)
B46	Arteriosclerosis	440	986	1.7	159	1,275	2.7
	Other diseases of circulatory system	441-448, 450-458					
	Other diseases of respiratory system	460-466, 500-508, 510-519	949	1.6	153	677	1.4
	All other diseases	Remainder of 240-738	465	0.8	75	345	0.7
BE47	Motor vehicle accidents	E810-E823	2,141	3.6	345	2,320	5.0
BE48	All other accidents	E800-E807, E825-E949	2,700	4.5	988	2.1	162
BE49	Suicide and self-inflicted injuries	E950-E959	1,707	2.9	1,031	2.2	169
BE50	All other external causes	E960-E999	1,025	1.7	477	1.0	78
		265	0.4	43	147	0.3	24
All causes		59,686	100.0	9,629	46,810	100.0	7,663

(a) Number of deaths per million of estimated mean population. (b) Less than 0.05. (c) Less than 0.5.

**B. CAUSES OF DEATH: MALES AND FEMALES IN AGE GROUPS, AUSTRALIA, 1969**

**ABBREVIATED LIST OF 50 CAUSES (BASED ON THE EIGHTH REVISION OF THE INTERNATIONAL LIST)**

		Number of deaths in age groups (years)											
Cause of death(a)	Sex	0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75 plus	Not stated	Total
B 3	Bacillary dysentery and amoebiasis	M	1	..	..	..	2	..	..	..	..	..	3
		F	1	1	..	..	1	..	..	1	..	..	4
B 4	Enteritis and other diarrhoeal diseases	M	57	31	3	..	2	5	9	7	23	26	163
		F	56	36	1	..	1	1	8	9	19	50	181
B 5	Tuberculosis of respiratory system	M	..	..	..	1	3	3	14	32	37	29	119
		F	..	..	1	..	2	2	7	6	8	3	29
B 6	Other tuberculosis, including late effects	M	..	1	..	..	1	1	3	14	13	5	38
		F	..	2	..	..	2	1	4	11	3	4	27
B 9	Whooping cough	M	2	..	..	..	..	..	..	..	..	..	2
		F	1	1	..	..	..	..	..	..	..	..	2
B10	Streptococcal sore throat and scarlet fever	F	1	..	1	..	..	..	..	..	..	..	2
B11	Meningococcal infection	M	4	4	6	2	..	..	..	1	..	..	17
		F	3	4	2	..	..	..	..	..	..	..	9
B14	Measles	M	2	7	2	3	..	..	..	..	1	..	15
		F	3	12	2	1	..	..	..	..	1	..	19
B16	Malaria	M	..	..	..	..	..	1	..	..	..	..	1
B17	Syphilis and its sequelae	M	..	..	..	..	..	1	4	3	5	3	16
		F	1	..	..	..	..	..	1	1	2	..	5
B18	All other infective and parasitic diseases	M	35	6	12	4	6	10	10	21	24	16	144
		F	27	7	5	3	8	13	15	10	11	24	123
B19	Malignant neoplasms:												
	Digestive organs	M	1	1	..	6	20	99	323	708	950	905	3,013
		F	..	1	..	3	23	82	262	495	781	1,236	2,884
	Lung	M	..	..	..	1	5	63	337	814	972	462	2,654
		F	..	..	..	..	2	15	62	109	94	101	383
	Skin	M	..	..	1	6	24	35	59	82	61	48	316
		F	..	..	..	4	11	27	30	28	36	47	183
	Breast	M	..	..	..	..	..	..	4	..	3	2	9
		F	..	..	..	1	15	111	310	377	272	362	1,448
	Genital organs	M	..	3	..	19	15	11	15	105	303	568	1,039
		F	..	..	2	4	13	81	215	240	269	249	1,073
	Urinary organs	M	..	7	4	..	2	13	66	133	160	152	537
		F	1	3	5	2	1	4	26	54	72	94	262
	Leukaemia and aleukaemia	M	3	27	41	19	13	18	45	83	81	59	389
		F	..	22	27	18	15	23	25	46	52	66	294
	Other malignant and lymphatic neoplasms	M	4	17	40	55	54	121	252	445	418	298	1,705
		F	3	11	23	30	34	61	150	276	281	292	1,161
B20	Benign neoplasms and neoplasms of unspecified nature	M	3	4	5	6	..	10	13	22	22	15	100
		F	5	2	5	5	5	5	22	21	17	12	99
B21	Diabetes mellitus	M	..	1	..	2	6	33	51	137	256	275	761
		F	..	1	3	6	2	22	43	115	316	488	996
B22	Avitaminoses and other nutritional deficiency	M	1	1	..	1	..	..	2	6	11	19	41
		F	9	3	..	1	2	..	5	11	5	20	56

For footnote see end of table next page.



B. CAUSES OF DEATH: MALES AND FEMALES IN AGE GROUPS, AUSTRALIA, 1969—*continued*ABREVIATED LIST OF 50 CAUSES (BASED ON THE EIGHTH REVISION OF THE INTERNATIONAL LIST)—*continued*

Cause of death(a)		Sex	Number of deaths in age groups (years)										75 plus	Not stated	Total
			0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74				
B23	Anaemias . . . . .	M	2	2	3	1	4	4	3	10	16	49	..	94	
		F	1	..	2	2	2	4	6	13	27	76	..	133	
B24	Meningitis . . . . .	M	20	9	4	1	1	3	3	3	2	3	..	49	
		F	22	3	5	1	1	3	1	6	4	6	..	52	
B25	Active rheumatic fever . . . . .	M	..	1	..	2	1	..	3	2	2	2	..	13	
		F	..	1	..	..	2	1	..	2	1	2	..	10	
B26	Chronic rheumatic heart disease . . . . .	M	..	..	2	9	16	36	63	104	105	72	..	407	
		F	..	..	2	7	12	28	63	109	115	176	..	512	
B27	Hypertensive disease . . . . .	M	..	..	..	2	5	26	70	159	207	280	..	749	
		F	..	..	..	1	7	30	47	109	229	522	..	945	
B28	Ischaemic heart disease . . . . .	M	..	..	..	1	58	562	2,212	4,898	5,994	6,215	3	19,943	
		F	..	..	..	2	10	101	518	1,601	3,642	6,893	1	12,768	
B29	Other forms of heart disease . . . . .	M	7	1	3	12	17	44	105	214	448	1,214	2	2,067	
		F	11	5	5	11	22	31	56	127	392	1,930	1	2,591	
B30	Cerebrovascular disease . . . . .	M	1	1	4	16	47	137	398	947	1,757	2,930	1	6,239	
		F	..	3	5	8	26	124	372	721	1,860	5,274	1	8,394	
B31	Influenza . . . . .	M	4	..	1	4	4	6	19	17	28	39	..	122	
		F	3	..	..	1	2	4	10	10	26	36	..	93	
B32	Pneumonia . . . . .	M	219	29	12	10	11	50	114	135	263	656	..	1,499	
		F	166	36	7	9	14	21	38	70	145	661	..	1,167	
B33	Bronchitis, emphysema and asthma . . . . .	M	13	10	15	14	18	40	153	569	1,073	1,085	..	2,990	
		F	6	2	5	21	17	39	73	107	155	260	..	685	
B34	Peptic ulcer . . . . .	M	1	..	..	..	3	19	45	85	98	129	1	381	
		F	..	..	1	..	3	5	23	32	42	100	..	206	
B35	Appendicitis . . . . .	M	..	1	4	..	1	2	6	7	10	7	..	38	
		F	..	1	1	4	1	3	1	1	7	10	..	29	
B36	Intestinal obstruction and hernia . . . . .	M	28	1	..	4	3	4	11	21	38	65	..	175	
		F	25	..	4	1	..	3	7	12	41	106	..	199	
B37	Cirrhosis of liver . . . . .	M	1	1	2	4	12	64	127	133	94	22	..	460	
		F	3	1	2	3	2	19	62	51	47	26	..	216	
B38	Nephritis and nephrosis . . . . .	M	2	1	5	5	19	19	60	92	97	112	..	412	
		F	1	..	4	5	9	27	49	65	77	122	..	359	
B39	Hyperplasia of prostate . . . . .	M	..	..	..	..	..	..	1	16	43	187	..	247	
B40	Abortion . . . . .	F	..	..	..	..	..	3	..	..	..	..	..	3	
B41	Other complications of pregnancy, childbirth and the puerperium. Delivery without mention of complication . . . . .	F	..	..	..	12	14	14	1	..	..	..	..	41	
B42	Congenital anomalies . . . . .	M	479	50	35	26	16	5	13	20	7	..	..	651	
		F	400	55	39	15	12	9	19	26	11	6	..	592	
B43	Birth injury, difficult labour and other anoxic and hypoxic conditions . . . . .	M	525	1	1	2	..	..	1	..	..	..	..	530	
		F	339	1	1	1	..	..	..	..	..	..	..	342	
B44	Other causes of perinatal mortality . . . . .	M	942	..	1	..	..	..	..	..	..	..	..	942	
		F	633	1	1	..	28	26	..	..	..	..	2	635	
B45	Symptoms and ill-defined conditions . . . . .	M	30	6	3	22	28	33	48	48	112	2	358		
		F	17	2	1	7	9	12	20	21	43	205	1	338	
	Arteriosclerosis . . . . .	M	..	..	..	..	..	3	5	35	191	752	..	986	
		F	..	..	..	..	..	1	7	17	115	1,135	..	1,275	
B46	Other diseases of circulatory system . . . . .	M	..	1	1	5	9	13	68	181	305	366	..	949	
		F	..	2	1	8	6	14	30	75	145	396	..	677	
	Other diseases of respiratory system . . . . .	M	69	19	12	11	7	11	30	64	103	139	..	465	
		F	69	19	2	5	3	16	26	30	50	125	..	345	
	All other diseases . . . . .	M	52	37	50	81	44	137	237	416	481	605	1	2,141	
		F	28	16	45	38	66	122	246	354	457	947	1	2,320	
BE47	Motor vehicle accidents . . . . .	M	6	63	154	902	407	301	267	296	203	99	2	2,700	
		F	6	59	92	244	77	85	109	123	122	71	..	988	
BE48	All other accidents . . . . .	M	65	97	146	233	180	210	222	174	125	252	3	1,707	
		F	51	71	47	35	16	35	60	64	107	545	..	1,031	
BE49	Suicide and self-inflicted injuries . . . . .	M	..	..	6	118	176	230	198	139	106	52	..	1,025	
		F	..	..	..	41	70	100	121	78	47	20	..	477	
BE50	All other external causes . . . . .	M	5	7	11	29	41	51	50	42	15	14	..	265	
		F	6	4	7	24	22	34	21	17	7	5	..	147	
All Causes . . . . .			M	2,584	448	588	1,639	1,281	2,427	5,724	11,440	15,199	18,340	16	59,686
			F	1,898	389	357	584	561	1,337	3,170	5,650	10,153	22,705	6	46,811

(a) In 1969, there were no male deaths recorded in the following categories: B1, Cholera (000); B2, Typhoid fever (001); B7, Plague (020); B8, Diphtheria (032); B10, Streptococcal sore throat and scarlet fever (034); B12, Acute poliomyelitis (040-043); B13, Smallpox (050); B15, Typhus and other rickettsioses (080-083). No female deaths were recorded in the following categories: B1; B2; B7; B8; B12; B13; B15; B16, Malaria (084).

## Causes of death—children under one year

Causes of death of children under one year of age should be considered in relation to age at death, because the emphasis on various causes changes rapidly as age at death varies. A summary for 1969 of deaths of children under one year of age, classified according to principal causes of death and age at death, is given in the following table.

**DEATHS OF CHILDREN UNDER ONE YEAR OF AGE, BY CAUSE OF DEATH  
AUSTRALIA, 1969**

Inter- national Classi- fication of Diseases number	Cause of death	Age at death										
		Days		Total under one week	Weeks		Total under four weeks	Months			Total under one year	
		Under 1	1-6		1	2		3	1-2 (a)	3-5		6-11
760	Chronic circulatory and genito- urinary diseases in mother .	19	9	28	..	..	2	30	..	..	..	30
761	Other maternal conditions un- related to pregnancy .	52	31	83	2	..	..	85	4	1	..	90
762	Toxaemias of pregnancy .	45	55	100	..	1	..	101	1	..	..	102
763	Maternal ante and intrapartum infection .	16	9	25	1	1	..	27	..	..	..	27
764-768	Difficult labour .	116	76	192	4	3	..	199	1	..	..	200
769	Other complications of pregnancy and childbirth .	362	158	520	13	5	..	538	..	..	..	538
770	Conditions of placenta .	215	106	321	3	1	1	326	1	..	..	327
771	Conditions of umbilical cord .	30	12	42	1	..	1	44	1	1	..	46
772, 773	Birth injury without mention of cause .	35	50	85	4	3	1	93	1	2	1	97
774, 775	Haemolytic disease of newborn .	63	28	91	3	..	1	95	..	..	..	95
776	Anoxic and hypoxic conditions not elsewhere classified .	308	245	553	13	6	1	573	3	..	..	576
777	Immaturity unqualified .	184	62	246	3	1	2	252	2	..	..	254
778, 779	Other conditions of newborn .	15	32	47	2	5	2	56	1	..	..	57
740-759	Congenital anomalies .	253	208	461	60	42	28	591	122	94	72	879
000-136	Infections .	3	7	10	13	10	7	40	35	41	78	194
480-486	Pneumonia .	5	29	34	17	12	6	69	96	128	92	385
(b)	Other diseases .	30	31	61	14	19	14	108	102	124	112	446
E911-E913	Inhalation or ingestion of food or other object causing obstruction or suffocation, and accidental mechanical suffocation .	..	3	3	2	..	2	7	28	29	22	86
(c)	Other external causes .	4	..	4	..	1	1	6	9	12	26	53
	All Causes . . . . .	1,755	1,151	2,906	155	110	69	3,240	407	432	403	4,482

(a) Age four weeks and under 3 months.

(b) 140-474, 490-738, 780-796.

(c) E800-E910, E914-E999

**Deaths from certain important causes**

In the preceding tables, particulars have been given for each of the causes of death comprising the Abbreviated Classification according to the Eighth Revision of the International List. Certain important causes are discussed in detail below. The Abbreviated Classification numbers used in Tables A and B (pages 180-2) are indicated in parentheses for each cause or group of causes.

*All forms of tuberculosis (B5, B6).* The reduction in mortality from tuberculosis is shown by the decline in the crude death rate from tubercular diseases, which fell from 49 per 100,000 of mean population in 1931 to 18 in 1951, and to 0.5 in 1969. The reductions in the younger age groups are much greater. In making these comparisons, consideration of the effect of the change in basis from the Fifth to the Sixth Revision of the International List is particularly important.

*Malignant neoplasms, including neoplasms of lymphatic and haematopoietic tissues (B19).* Deaths classified under this heading according to the Sixth, Seventh and Eighth Revisions of the International List (used in Australia for deaths registered since 1950) are not directly comparable in total with those on the Fifth Revision basis (see Year Book No. 39, p. 628).

The most common sites of malignant neoplasms causing death in 1969 were as follows: digestive organs (males, 3,013; females, 2,884); lung (males, 2,654; females, 383); genital organs (males, 1,039; females, 1,073); breast (males, 9; females, 1,448); urinary organs (males, 537; females, 262); leukaemia and aleukaemia (males, 389; females, 294).

Deaths in age groups and age-specific death rates for males and females who died from malignant neoplasms in 1969 are given in the table below, together with figures for 1950 and 1960.

**DEATHS AND DEATH RATES FROM MALIGNANT NEOPLASMS(a), BY AGE GROUP AND SEX  
AUSTRALIA, 1950 TO 1969(b)**

Age group (years)	1950				1960				1969			
	Number		Rate(c)		Number		Rate(c)		Number		Rate(c)	
	M	F	M	F	M	F	M	F	M	F	M	F
Under 15 . . . . .	92	53	8	5	141	110	9	7	149	98	8	6
15-29 . . . . .	95	75	10	8	112	75	10	7	165	104	11	7
30-44 . . . . .	249	413	27	47	361	517	32	49	434	476	37	43
45-54 . . . . .	552	669	118	148	852	831	138	143	1,101	1,080	157	156
55-64 . . . . .	1,294	1,171	347	299	1,671	1,186	401	276	2,370	1,625	443	303
65 and over . . . . .	3,072	2,694	1,014	748	4,067	3,373	1,075	679	5,442	4,304	1,270	716
Total . . . . .	5,355	5,075	130	125	7,207	6,092	139	120	9,662	7,688	156	126
	(d)				(e)				(d)	(f)		

(a) Includes neoplasms of lymphatic and haematopoietic tissues. (b) Excludes particulars of full-blood Aborigines prior to 1967. (c) Number of deaths per 100,000 of population at risk. For the individual age groups, the population at risk is that estimated at 30 June. For the total of all ages, the population at risk is the calendar year mean population. (d) Includes 1 male, age not stated. (e) Includes 3 males, age not stated. (f) Includes 1 female, age not stated.

Death rates from malignant neoplasms per 100,000 of mean population for Australia and for various other countries for the latest available year are as follows: Israel, 109; Japan, 113; Poland, 133; South Africa (white population), 137; Canada, 138; Australia, 141; United States of America, 157; Italy, 166; Uruguay, 188; Netherlands, 198; France, 212; England and Wales, 232; Scotland, 240.

*Causes of infant mortality.* See paragraph devoted to causes of infant deaths on page 182.

*Diseases of the circulatory system (B25-B30, part B46).* This class is the largest among causes of death, representing 55 per cent of total deaths in 1969. The following table shows the number of deaths and death rates per 100,000 of mean population from diseases of the circulatory system for the years 1950-69. Comparability of the figures is not affected by the various revisions of the International Classification of Diseases.

**DEATHS AND DEATH RATES FROM DISEASES OF THE CIRCULATORY SYSTEM  
BY SEX, AUSTRALIA, 1950 TO 1969(a)**

Year	Cerebrovascular disease				Heart disease				Other diseases of circulatory system				Total			
	Number		Rate(b)		Number		Rate(b)		Number		Rate(b)		Number		Rate(b)	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1950 . . . . .	4,035	5,351	98	132	14,687	10,256	356	253	1,736	1,802	42	44	20,458	17,409	496	429
1955 . . . . .	4,811	6,224	103	137	16,382	11,303	352	249	1,843	1,886	40	42	23,036	19,413	495	427
1960 . . . . .	5,183	6,659	100	131	18,654	13,173	359	259	2,068	1,970	40	39	25,905	21,802	499	429
1965 . . . . .	5,809	7,835	101	139	21,843	15,546	381	275	2,029	2,071	35	37	29,681	25,452	517	450
1969 . . . . .	6,239	8,394	101	137	22,887	16,529	369	271	2,227	2,249	36	37	31,353	27,172	506	445

(a) Excludes particulars of full-blood Aborigines prior to 1967. (b) Per 100,000 of mean population.

*Accidents, poisonings and violence (BE47 to BE50).* Deaths in this class are classified according to external cause and not according to nature of injury. The classification provides sub-groups for accidents, including adverse reactions to prophylactic inoculations, therapeutic misadventures and late effects of accidental injury; suicide; homicide and injuries purposely inflicted by other persons; injuries undetermined whether accidentally or purposely inflicted; and injury resulting from operations of war, including delayed effects.

The following table, showing the death rates in the main sub-groups per 100,000 of mean population, indicates that the death rate from violence is between two and three times as great for males as for females. The low level of the rates and proportions for the years 1941-45 is due largely to the exclusion of deaths of defence personnel from accidents, suicide and homicide, though the rates have been based on total mean population (including defence personnel). A further contributing factor is the decrease during this period in the number of automobile accidents. From July 1947 deaths of defence personnel from accidents, etc. have again been included.



**ACCIDENTS, POISONINGS, AND VIOLENCE: DEATH RATES(a), BY SEX  
AUSTRALIA, 1936 TO 1969(b)**

Period	Death rate from—										All violence, percentage of total deaths	
	Motor vehicle accidents		Suicide		Homicide(c)		Other violence(d)		Total violence			
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1936-40	32	8	17	5	2	1	55	20	105	34	9.80	3.99
1941-45	19	5	11	5	1	1	48	21	79	31	7.30	3.48
1946-50	30	6	14	5	1	1	46	21	91	33	8.44	3.83
1951-55	38	9	15	5	2	1	44	22	99	37	9.64	4.53
1956-60	37	11	17	6	2	1	38	20	93	39	9.57	4.95
1961-65	38	13	19	9	2	1	34	19	93	42	9.54	5.50
1966	41	15	17	11	2	1	32	19	92	46	9.33	5.72
1967	42	15	19	11	2	1	35	20	97	47	10.08	6.11
1968	43	14	17	8	2	1	33	21	95	45	9.43	5.51
1969	44	16	17	8	2	1	30	18	92	43	9.54	5.65

(a) Number of deaths per 100,000 of mean population. (b) Excludes particulars of full-blood Aborigines before 1967. (c) Includes deaths from injury purposely inflicted by other persons (not in war) and legal intervention. (d) Includes deaths from injury undetermined whether accidentally or purposely inflicted.

In 1969 the total number of deaths from *accidental causes* (BE47, BE48) was 6,426 (4,407 males and 2,019 females). Over half of the accidental deaths were the result of transport accidents. Of these, the numbers attributable to the major causes, and the percentages of the total accidental deaths in each case, were as follows: Motor vehicle traffic accidents, 3,597 (55.98 per cent); motor vehicle non-traffic accidents, 91 (1.42 per cent); other road vehicle accidents, 38 (0.59 per cent); railway accidents, 77 (1.20 per cent); water transport accidents, 102 (1.59 per cent); aircraft accidents, 62 (0.96 per cent); a total of 3,967 (61.73 per cent). Other important causes were accidental falls, 1,073 (16.70 per cent); accidental drowning, 326 (5.07 per cent); accidents caused by fires and flames, 190 (2.96 per cent); and accidental poisonings, 146 (2.27 per cent).

Deaths from *suicide* (BE 49) in 1969 numbered 1,502 (males, 1,025; females, 477). Poisoning, other than by gases, occurred in 617 cases (41.08 per cent of total deaths by suicide). Other important modes adopted, together with the numbers and relevant percentages, were as follows: firearms and explosives, 330 (21.97 per cent); poisoning by gases, 238 (15.85 per cent); hanging or strangulation 148 (9.85 per cent); submersion (drowning), 57 (3.79 per cent); other and unspecified modes, 57 (3.79 per cent). Of the 1,025 males who committed suicide, 303 (29.56 per cent) used firearms or explosives. For females the most common mode was poisoning (other than by gases). This was used in 303 cases (63.52 per cent).

Of the 412 deaths recorded in 1969 to all other external causes (BE50), there were 153 deaths from homicide and injury purposely inflicted by other persons, 4 deaths from legal intervention by firearms, 243 deaths from injury undetermined whether accidentally or purposely inflicted (of which 135 were due to poisoning other than by gases), 1 death from injury due to war operations by bullets and fragments and 11 deaths from late effects of injury due to operations of war.

### Vital statistics of External Territories

The following table shows, for the year 1969, the number of marriages, births and deaths registered in the External Territories under the control of Australia. More detailed information will be found in *Demography*, Bulletin No. 85.

#### EXTERNAL TERRITORIES: VITAL STATISTICS, 1969

Territory	Marriages	Births	Deaths
Christmas Island(a)	9	32	8
Cocos (Keeling) Islands(a)	5	8	4
Norfolk Island(a)	12	17	9
Territory of Papua and New Guinea(b)	321	1,256	148

(a) Total population.

(b) Non-indigenous population only.

## International vital statistics

In the following table vital statistics rates for certain countries are shown. Crude marriage, birth, and death rates represent the number of 'events' reported for the year stated per 1,000 of the population. Infant mortality rates are the number of deaths which occurred under one year of age per 1,000 live births. The true death rates (reciprocals of the expectation of life at birth) have been computed from the life tables for the respective countries as published in the United Nations *Demographic Yearbook*, 1969 (see explanation of true death rates, pages 171-2).

In many instances the rates shown in the following table are estimates and the results of sample surveys only. Reference should be made to the detailed comments contained in the United Nations *Demographic Yearbook*, 1969 (see particularly Technical Notes on Statistical Tables and footnotes to the tables). The countries are arranged in the same order as in the table on page 152 of the Population chapter.

## VITAL STATISTICS RATES: CERTAIN COUNTRIES—LATEST AVAILABLE YEAR

(Source: United Nations *Demographic Yearbook*, 1969)

Country	Rates(a)					True death rates(b)		
	Year	Marriage	Birth	Death	Infant mortality	Year	Male	Female
<b>Africa—</b>								
United Arab Republic . . . . .	1969	9.4	36.8	14.4	118.5	1960	19.4	18.6
Ethiopia . . . . .	1963	n.a.	43.1	22.2	84.2		n.a.	n.a.
<b>South Africa—</b>								
Asian population . . . . .	1968	8.3	32.3	7.3	50.8	1959-61	17.3	16.8
Coloured population . . . . .	1968	6.4	40.0	14.4	128.8	1959-61	20.2	18.4
White population . . . . .	1968	10.1	23.6	8.8	24.6	1959-61	15.4	14.0
Morocco . . . . .	1962	n.a.	46.1	18.7	149.0	1962	21.3	
Algeria . . . . .	1968	(c)4.7	40.9	10.4	(d)86.3		n.a.	n.a.
Tanzania . . . . .	1967	n.a.	47	22	160-165	1967	24-25	
Kenya . . . . .	1962	n.a.	50	20	n.a.	1962	22-25	
<b>North America—</b>								
United States of America . . . . .	1969	10.6	17.7	9.5	20.8	1967	14.9	13.5
Mexico . . . . .	1960-65	(e)7.1	44-45	10-11	(e)65.7	1959-61	17.4	16.6
Canada . . . . .	1969	8.6	17.6	7.3	(f)20.8	1960-62	14.6	13.5
<b>South America—</b>								
Brazil . . . . .	1960-65	n.a.	41-43	10-12	n.a.		n.a.	n.a.
Argentina . . . . .	1960-65	(c)6.8	22-23	8-9	(c)58.3	1960-65	15.7	14.4
Colombia . . . . .	1960-65	(f)4.2	41-44	12-14	(f)78.3		n.a.	n.a.
Peru . . . . .	1960-65	(c)3.3	44-45	12-14	(c)61.9	1960-65	19.0	18.0
Venezuela . . . . .	1960-65	(c)5.7	46-48	9-10	(c)41.4	1961	15.1	
<b>Asia—</b>								
Indonesia . . . . .	1962	10.6	43.0	21.4	125	1960	21.1	21.1
Pakistan . . . . .	1965	n.a.	49	18	(g)142	1962	18.6	20.5
Japan . . . . .	1969	9.3	18.3	6.7	15.3	1967	14.5	13.5
Philippines . . . . .	1968	(f)5.5	25.0	6.9	(h)72.0		n.a.	n.a.
Thailand . . . . .	1964	(c)1.4	46.0	12.9	(c)27.9	1960	18.7	17.0
Turkey . . . . .	1966	n.a.	43	16	155	1966	18.6	
Korea, Republic of . . . . .	1965	12.0	n.a.	n.a.	(c)40-50		n.a.	n.a.
China, Republic of (Taiwan) . . . . .	1969	6.7	25.2	5.2	(f)19.0	1965	15.2	14.2
Korea, North . . . . .	1962	n.a.	41.1	10.8	n.a.		n.a.	n.a.
Ceylon . . . . .	1968	(c)6.5	31.8	7.9	(c)47.7	1962	16.2	16.3
Nepal . . . . .	1961	n.a.	41.1	20.8	n.a.		n.a.	n.a.
West Malaysia (Malaya) . . . . .	1967	1.2	35.3	7.5	45.1	1966	15.8	15.1
<b>Europe—</b>								
<b>Germany—</b>								
Eastern Germany . . . . .	1968	7.0	14.3	14.3	20.4	1965-66	14.6	13.6
Federal Republic of . . . . .	1969	7.3	14.8	12.2	(f)22.8	1965-67	14.8	13.6
United Kingdom . . . . .	1968	8.4	17.1	11.9	18.8	1966-68	14.6	13.4
England and Wales . . . . .	1968	8.4	16.9	11.9	18.3	1966-68	14.6	13.4
Northern Ireland . . . . .	1968	7.5	22.1	10.6	24.0	1966-68	14.7	13.6
Scotland . . . . .	1968	8.4	18.3	12.2	20.8	1968	14.9	13.7
Italy . . . . .	1969	7.2	17.6	10.1	30.3	1960-62	14.9	13.8
France . . . . .	1968	7.2	16.8	11.0	20.4	1966	14.7	13.3
Spain . . . . .	1969	7.2	20.1	9.2	29.8	1960	14.9	13.9
Poland . . . . .	1969	8.3	16.3	8.1	34.3	1965-66	15.0	13.7
Yugoslavia . . . . .	1969	8.5	18.8	9.2	56.3	1961-62	16.0	15.2
Romania . . . . .	1969	7.0	23.3	10.1	54.9	1964-67	15.0	14.2
Czechoslovakia . . . . .	1969	8.7	15.5	11.2	22.9	1966	14.9	13.6
Netherlands . . . . .	1969	9.1	19.2	8.3	13.1	1967	14.1	13.1
Hungary . . . . .	1969	9.3	15.0	11.3	35.6	1964	14.9	13.9
Greece . . . . .	1968	7.4	18.2	8.3	34.4	1960-62	14.8	14.1
<b>Oceania—</b>								
Australia . . . . .	1969	9.1	20.3	8.7	17.9	1969	14.8	13.4
New Zealand . . . . .	1969	9.0	22.5	8.7	16.9	1960-62	14.6	13.6
<b>U.S.S.R.—</b>								
Union of Soviet Socialist Republics . . . . .	1968	8.9	17.2	7.7	26.4	1967-68	14.3	

(a) Crude marriage, birth and death rates, i.e., number of marriages, births and deaths per 1,000 of population. Infant mortality—number of deaths of children under one year of age per 1,000 live births. (b) Number of deaths per 1,000 males and 1,000 females respectively in stationary population (see explanation on page 171). (c) 1967. (d) 1965. (e) 1969. (f) 1968. (g) 1962-65. (h) 1966.

## CHAPTER 9

### HOUSING AND BUILDING

Pages 187-92 of this chapter give details of the *characteristics of dwellings as obtained from censuses*, pages 192-204 contain a *summary of building activities*, pages 204-14 outline *government activities in the field of housing*, and pages 215-20 relate to *financial arrangements associated with the erection or purchase of homes*.

Further information on dwellings obtained from censuses is available in the detailed tables of the 1961 Census and earlier censuses and in the mimeographed statements of the 1966 Census (*see the chapter Miscellaneous of this Year Book*).

More detailed information on building activity is contained in the annual bulletin *Building and Construction* and the *Quarterly Bulletin of Building Statistics*, and current information is obtainable also in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and the mimeographed statements *Building Statistics: Number of New Houses and Flats* (quarterly), and *Building Approvals* (monthly). Details for particular States are available from publications issued regularly by the Deputy Commonwealth Statisticians.

Commonwealth Government activities relate in the main to the provision of moneys to State Governments under Commonwealth-State Housing Agreements, to the assistance of ex-service personnel in the erection and purchase of homes, to assistance to young married couples under the Home Savings Grant Act, to the operation of the Housing Loans Insurance Corporation, and to the provision of homes in the Territories. Further details of activities of the Commonwealth and State Housing Authorities are shown in the reports issued by these authorities.

#### Census dwellings

At each census of the population, in addition to the questions relating to personal particulars, there have been a number of questions relating to dwellings. A 'dwelling' is defined as any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building, and includes, *in addition to houses and self-contained flats*, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution. This section contains particulars of such information on dwellings as is available from the 1966 Census, together with information from earlier censuses. All statistics in this section are exclusive of particulars of dwellings occupied solely by Aborigines.\*

#### Number of dwellings

The following table shows the number of occupied and unoccupied dwellings in Australia at each census from 1911 to 1966. Occupied dwellings are classified into 'private' and 'other than private' dwellings (*see* page 188 for definitions of 'private' and 'other than private' dwellings). Unoccupied dwellings include dwellings whose occupants are temporarily absent, holiday homes, and other temporarily vacant dwellings (*see* page 191 for full explanation of the term 'unoccupied').

**DWELLINGS: AUSTRALIA, CENSUSES, 1911 TO 1966**

Census	Occupied			Unoccupied
	Private	Other than private	Total	
1911 . . .	894,389	29,070	923,459	33,473
1921 . . .	1,107,010	46,275	1,153,285	51,163
1933 . . .	1,509,671	37,705	1,547,376	68,772
1947 . . .	1,873,623	34,272	1,907,895	47,041
1954 . . .	2,343,421	36,932	2,380,353	112,594
1961 . . .	2,781,945	35,325	2,817,270	194,114
1966 . . .	3,151,926	33,730	3,185,656	263,873

\* *See* page 66, Year Book No. 54 for results of *Constitution Alteration (Aboriginals)* 1967 Referendum.



The following table shows the number of occupied and unoccupied dwellings in the urban and rural areas of Australia at the Census of 30 June 1966. For delimitation of 'urban centres' see this Year Book, page 125.

DWELLINGS: URBAN AND RURAL, AUSTRALIA, CENSUS, 30 JUNE 1966

Division	Occupied				Unoccupied	
	Private	Other than private	Total		Number	Percentage of total
			Number	Percentage of total		
Urban—						
Metropolitan . . .	1,886,055	14,287	1,900,342	59.65	86,826	32.90
Other . . .	778,681	9,500	788,181	24.74	81,748	30.98
Rural . . .	487,190	9,943	497,133	15.61	95,299	36.12
Total . . .	3,151,926	33,730	3,185,656	100.00	263,873	100.00

The total numbers of occupied and unoccupied dwellings in each State and Territory at the Censuses of 1961 and 1966 were as follows.

DWELLINGS: STATES AND TERRITORIES, CENSUSES, 1961 AND 1966

State or Territory	Census, 30 June 1961		Census, 30 June 1966	
	Occupied	Unoccupied	Occupied	Unoccupied
New South Wales . . .	1,061,609	72,432	1,189,539	101,546
Victoria . . .	790,529	47,389	888,984	64,757
Queensland . . .	398,233	33,969	449,169	41,818
South Australia . . .	261,908	17,061	302,314	25,110
Western Australia . . .	194,317	13,705	224,663	17,965
Tasmania . . .	91,258	8,582	99,366	10,800
Northern Territory . . .	5,479	179	8,067	380
Australian Capital Territory . . .	13,937	797	23,554	1,497
Australia . . .	2,817,270	194,114	3,185,656	263,873

Class of dwelling (1961 and 1966)

The following table shows the numbers of the various classes of occupied dwellings in the metropolitan urban, other urban, and rural areas of Australia at the Census of 30 June 1966 and totals for the Censuses of 1961 and 1966. The numbers of the various classes of dwelling for each State and Territory at the 1966 Census are given in the table on page 189.

Private dwellings are classified into the following categories:

- private house*—includes houses, sheds, huts, garages, etc., used for dwelling purposes;
- share of private house*—portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received;
- self-contained flat*—part of a house or other building which can be completely closed off and which has its own cooking and bathing facilities;
- other private dwellings*—include private dwellings such as rooms, apartments, etc., which are parts of buildings but are not self-contained units.

Other than private dwellings includes hotels; motels; boarding houses, lodging houses and hostels; educational, religious and charitable institutions; hospitals; defence and penal establishments; police and fire stations; clubs; staff barracks and quarters, etc.

### OCCUPIED DWELLINGS, BY CLASS: URBAN AND RURAL(a), AUSTRALIA CENSUSES, 1961 AND 1966

Class of dwelling	Census, 30 June 1961			Census, 30 June 1966			Inter-censal increase or decrease
	Total	Percentage of total occupied dwellings	Urban			Percentage of total occupied dwellings	
			Metro-politan	Other	Rural		
Private dwellings—							
Private house	2,393,169	84.95	1,529,059	692,742	459,924	2,681,725	84.18
Share of private house	79,550	2.82	(b)20,940	(b)3,682	(b)1,292	25,914	0.81
Self-contained flat	217,586	7.72	274,367	63,338	7,880	345,585	10.85
Share of self-contained flat	(c)	(c)	(d)956	(d)193	(d)19	1,168	0.04
Shed, hut, tent, etc.	41,997	1.49	5,084	9,541	16,431	31,056	0.97
Other private dwellings	49,643	1.76	55,649	9,185	1,644	66,478	2.09
Total private dwellings	2,781,945	98.75	1,886,055	778,681	487,190	3,151,926	98.94
Non-private dwellings(e)	35,325	1.25	14,287	9,500	9,943	33,730	1.06
Total occupied dwellings	2,817,270	100.00	1,900,342	788,181	497,133	3,185,656	100.00

(a) Census 30 June 1966. (b) Represents 10,077 private houses in metropolitan areas, 1,799 in other urban areas and 637 in rural areas. (c) At the 1961 Census share of self-contained flat was not separately identified. In cases where more than one household group were occupying a self-contained flat they were counted as one household group occupying a self-contained flat. (d) Represents 462 self-contained flats in metropolitan areas, 93 in other urban areas and 9 in rural areas. (e) Details of the number of each of the types of non-private dwellings are available on request.

Minus sign (—) denotes decrease.

### OCCUPIED DWELLINGS, BY CLASS: STATES AND TERRITORIES CENSUS, 30 JUNE 1966

Class of dwelling	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
Private dwellings—									
Private house	961,077	752,776	381,681	271,045	200,900	88,780	5,817	19,649	2,681,725
Share of private house	11,496	9,166	1,586	2,140	844	469	43	170	25,914
Self-contained flat	164,380	92,166	43,069	20,802	14,074	7,036	838	3,220	345,585
Share of self-contained flat	666	277	104	61	18	22	5	15	1,168
Shed, hut, tent, etc.	12,309	3,725	7,952	1,938	3,439	882	616	195	31,056
Other private dwellings	28,194	23,338	7,759	3,644	2,169	1,093	180	101	66,478
Total private dwellings	1,178,122	881,448	442,151	299,630	221,444	98,282	7,499	23,350	3,151,926
Non-private dwellings	11,417	7,536	7,018	2,684	3,219	1,084	568	204	33,730
Total occupied dwellings	1,189,539	888,984	449,169	302,314	224,663	99,366	8,067	23,554	3,185,656

Population according to class of dwelling, etc. (1961 and 1966)

### NUMBER OF INMATES, BY CLASS OF DWELLING: AUSTRALIA CENSUSES, 1961 AND 1966

	Census, 30 June 1961		Census, 30 June 1966					
		Percentage of total population	Urban				Percentage of total population	Inter-censal increase or decrease
			Metro-politan	Other	Rural			
Persons enumerated in—								
Private dwellings—								
Private house . . . . .	8,881,128	84.52	5,581,056	2,498,521	1,743,443	9,823,020	85.04	941,892
Share of private house . . . .	224,066	2.13	59,943	10,281	4,556	74,780	0.65	-149,286
Self-contained flat . . . . .	552,596	5.26	646,203	163,753	23,759	833,715	7.22	283,648
Share of self-contained flat . .	(a)	(a)	2,060	425	44	2,529	0.02	(a)
Shed, hut, tent, etc. . . . .	116,458	1.11	13,415	24,390	38,881	76,686	0.66	-39,772
Other private dwellings . . . .	96,246	0.92	97,321	18,476	3,973	119,770	1.04	23,524
Total private dwellings . . . .	9,870,494	93.93	6,399,998	2,715,846	1,814,656	10,930,500	94.63	1,060,006
Non-private dwellings . . . . .	596,412	5.68	313,587	174,539	96,901	585,027	5.06	-11,385
Total . . . . .	10,466,906	99.61	6,713,585	2,890,385	1,911,557	11,515,527	99.70	1,048,621
Persons not enumerated in dwellings—								
Campers out . . . . .	15,994	0.15	1,412	7,128	6,708	15,248	0.13	-746
Migratory(b) . . . . .	25,286	0.24	..	..	..	19,687	0.17	-5,599
Total population . . . . .	10,508,186	100.00	6,714,997	2,897,513	1,918,265	11,550,462	100.00	1,042,276

(a) At the 1961 Census share of a self-contained flat was not separately identified. (b) Shipping, railway and air travellers.

Minus sign (—) denotes decrease.

**Occupied private dwellings**

The tables on pages 190-1 show private occupied houses and self-contained flats classified according to material of outer walls; nature of occupancy; and facilities. Details of number of rooms are shown for occupied private dwellings.

**Material of outer walls (1961 and 1966)****OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS, BY MATERIAL OF OUTER WALLS: AUSTRALIA, CENSUSES, 1961 AND 1966**

<i>Material of outer walls</i>	<i>Census, 30 June 1961</i>				<i>Census, 30 June 1966</i>			
	<i>Private houses</i>	<i>Percent- age of total</i>	<i>Self- contained flats</i>	<i>Percent- age of total</i>	<i>Private houses</i>	<i>Percent- age of total</i>	<i>Self- contained flats</i>	<i>Percent- age of total</i>
Brick . . . . .	743,426	31.06	144,209	66.28	674,286	25.14	224,947	65.09
Brick veneer(a) . . . . .	(b)	(b)	(b)	(b)	262,150	9.78	16,250	4.70
Stone . . . . .	71,476	2.99	5,904	2.71	68,898	2.57	6,514	1.88
Concrete . . . . .	62,839	2.63	9,226	4.24	68,144	2.54	17,670	5.11
Wood . . . . .	1,056,180	44.13	38,862	17.86	1,076,435	40.14	50,260	14.54
Iron, tin . . . . .	35,930	1.50	984	0.45	28,364	1.06	1,169	0.34
Fibro-cement . . . . .	411,960	17.21	17,675	8.12	495,284	18.47	28,559	8.26
Other . . . . .	10,165	0.42	349	0.16	8,164	0.30	216	0.06
Not stated . . . . .	1,193	0.05	377	0.17	(c)	(c)	(c)	(c)
<b>Total</b> . . . . .	<b>2,393,169</b>	<b>100.00</b>	<b>217,586</b>	<b>100.00</b>	<b>2,681,725</b>	<b>100.00</b>	<b>345,585</b>	<b>100.00</b>

(a) So described in individual census schedules. (b) At the 1961 Census, dwellings with walls of brick veneer were not separately identified and for tabulation purposes were included with brick walled dwellings. (c) In the small number of cases where material of outer walls was not stated a material was selected during processing of the 1966 Census schedules. Selection was based upon the answer given for the geographically nearest dwelling of the same class as the dwelling for which material of outer walls was not stated.

**Number of rooms (1961 and 1966)****OCCUPIED PRIVATE DWELLINGS, BY NUMBER OF ROOMS AND CLASS OF DWELLING AUSTRALIA, CENSUSES, 1961 AND 1966**

<i>Number of rooms per dwelling(a)</i>	<i>Census, 30 June 1961</i>				<i>Census, 30 June 1966</i>			
	<i>Class of dwelling</i>				<i>Class of dwelling</i>			
	<i>Private house</i>	<i>Self- contained flat</i>	<i>Other</i>	<i>Total private dwellings</i>	<i>Private house</i>	<i>Self- contained flat</i>	<i>Other</i>	<i>Total private dwellings</i>
1 . . . . .	1,179	2,282	36,371	39,832	2,194	7,803	40,801	50,79
2 . . . . .	17,000	20,635	48,857	86,492	14,925	50,851	37,078	102,854
3 . . . . .	63,849	53,585	38,108	155,542	62,605	93,579	23,049	179,233
4 . . . . .	384,691	77,531	23,106	485,328	369,127	113,611	11,037	493,775
5 . . . . .	902,466	39,914	13,891	956,271	1,055,571	50,894	6,080	1,112,545
6 . . . . .	656,239	15,723	2,522	674,484	697,115	18,744	3,414	719,273
7 . . . . .	231,806	4,471	741	237,018	305,770	6,104	1,706	313,580
8 . . . . .	80,889	1,674	297	82,860	105,955	2,334	788	109,077
9 . . . . .	28,064	572	104	28,740	37,447	806	301	38,554
10 . . . . .	12,766	83	65	12,914	16,574	401	173	17,148
11 and over . . . . .	11,415	77	85	11,577	14,442	458	189	15,089
Not stated . . . . .	2,805	1,039	7,043	10,887	..	..	..	..
<b>Total private dwellings</b> . . . . .	<b>2,393,169</b>	<b>217,586</b>	<b>171,190</b>	<b>2,781,945</b>	<b>2,681,725</b>	<b>345,585</b>	<b>124,616</b>	<b>3,151,926</b>
<b>Average number of rooms per dwelling</b> . . . . .	<b>5.44</b>	<b>3.97</b>	<b>2.65</b>	<b>5.16</b>	<b>5.53</b>	<b>3.74</b>	<b>2.45</b>	<b>5.21</b>

(a) Includes kitchen and permanently enclosed sleep-out but does not include bathroom, pantry, laundry or storehouse.



## Nature of occupancy (1961 and 1966)

OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS, BY NATURE OF OCCUPANCY  
AUSTRALIA, CENSUSES, 1961 AND 1966

Nature of occupancy	Private houses				Self-contained flats			
	Census, 30 June 1961		Census, 30 June 1966		Census, 30 June 1961		Census, 30 June 1966	
	Total	Percent- age of private houses	Total	Percent- age of private houses	Total	Percent- age of flats	Total	Percent- age of flats
Owner	1,847,201	77.19	2,123,723	79.19	43,527	20.00	72,711	21.04
Purchaser by instalments								
Tenant of government authority	99,610	4.16	132,997	4.96	13,925	6.40	27,346	7.91
Other tenant	388,128	16.22	360,976	13.46	155,110	71.29	237,436	68.71
Other methods of occupancy	49,420	2.07	48,032	1.79	4,336	1.99	5,644	1.63
Not stated	8,810	0.37	15,997	0.60	688	0.32	2,448	0.71
Total	2,393,169	100.00	2,681,725	100.00	217,586	100.00	345,585	100.00

At the 1961 Census persons paying interest only on a mortgage on the dwelling were instructed to enter 'owner', but a person buying a house by regular payments including interest and principal was instructed to enter 'purchaser by instalments'. It is probable, however, that some 'purchasers by instalments' described themselves on 1961 Census schedules as 'owners' especially where they possessed the title to the property. However, the extent of such mis-statements has not been measured. At the 1966 Census, as the two categories can be logically grouped, separate details for 'owners' and 'purchasers by instalments' were not collected.

## Facilities (1961 and 1966)

OCCUPIED PRIVATE HOUSES AND SELF-CONTAINED FLATS, BY FACILITIES  
AUSTRALIA, CENSUSES, 1961 AND 1966

Facilities	Private houses		Self-contained flats	
	Census 30 June 1961(a)	Census 30 June 1966	Census 30 June 1961	Census 30 June 1966
With gas only	5,386	5,169	171	481
With electricity only	1,322,300	1,505,550	63,378	128,072
With gas and electricity	1,008,763	1,139,868	153,231	214,876
Neither gas nor electricity	87,839	23,497	277	271
Not stated	10,878	7,641	529	1,885
Total	2,435,166	2,681,725	217,586	345,585
With television set	1,139,578	2,154,321	97,226	235,083

(a) Includes 41,997 sheds, huts, tents, etc.

NOTE. Dwellings for which electricity was not stated but which had television have been classified as having electricity and therefore included as such in this table.

## Unoccupied dwellings (1961 and 1966)

The following table classifies unoccupied dwellings by class. Unoccupied dwellings include vacant dwellings available for sale or renting; dwellings such as 'week-enders', 'holiday homes', 'second homes', 'seasonal workers' quarters, which were not occupied on the night of the census; dwellings normally occupied, but whose usual occupants were temporarily absent on the night of the census; newly completed dwellings whose owners or tenants had not entered into occupation on the night of the census; dwellings described as 'to be demolished', 'condemned', 'deceased estate', 'exhibition home', etc.; and buildings constructed as dwellings but used for non-dwelling purposes on the night of the Census. The total number of unoccupied dwellings shown for any area does not, therefore, represent the number of vacant dwellings available for sale or renting.

**UNOCCUPIED DWELLINGS, BY CLASS: URBAN AND RURAL, AUSTRALIA  
CENSUSES, 1961 AND 1966**

Class of dwelling	Census 30 June 1961 Total	Census, 30 June 1966			
		Urban			
		Metropolitan	Other	Rural	Total
Private house . . . . .	156,473	55,636	66,362	79,149	201,147
Self-contained flat . . . . .	21,887	26,922	11,923	1,397	40,242
Other private dwellings(a) . . . . .	7,073	4,157	3,133	8,881	16,171
Non-private dwellings(a) . . . . .	1,443	111	330	5,872	6,313
Not stated . . . . .	7,238	..	..	..	..
<b>Total unoccupied dwellings . . . . .</b>	<b>194,114</b>	<b>86,826</b>	<b>81,748</b>	<b>95,299</b>	<b>263,873</b>

(a) The inter-censal increase in unoccupied other private and non-private dwellings is mainly the result of a better coverage at the 1966 Census of dwellings occupied for only a short period of time each year, such as shearers' huts, seasonal workers' quarters, etc.

## Building

### Statistics of building approved

Statistics of building approvals have been compiled since the year 1953-54 from (a) permits issued by local government authorities in the areas subject to building control by these authorities, and (b) contracts let or work commenced and day labour projects authorised by governmental authorities. *They relate only to approvals for buildings as distinct from the construction of roads, railways, bridges, earthworks, water storages, etc.* Values shown represent the estimated cost when completed (excluding cost of land) of new buildings and alterations and additions to existing buildings. Before 1 July 1966 additions of \$10,000 and over were included with new buildings in all States except New South Wales, where they were included in 'alterations and additions'. From 1 July 1966 alterations and/or additions of \$10,000 and over are included with new buildings in all States.

### Statistics of building commenced, completed and under construction

These relate to building by private contractors, government authorities and owner-builders. The following outlines the scope of the statistics: (a) *only the erection of new buildings as distinct from the construction of roads, railways, bridges, earthworks, water storages, etc., is covered*; (b) before 1 July 1966 major new additions to existing buildings in all States and major alterations in New South Wales were included with new buildings, while from 1 July 1966 alterations and/or additions of \$10,000 and over are included with new buildings in all States; (c) minor additions, alterations, renovations and repairs are excluded because of the difficulty of obtaining details of this work; (d) temporary dwellings, sheds, huts, etc., are excluded; (e) figures for houses exclude flats and dwellings attached to other new buildings (the value of dwellings attached to other new buildings is included with the value of buildings to which they are attached); figures for flats include 'home units'; (f) details obtained from government authorities and building contractors refer to all areas, whereas details for owner-builders cover only areas subject to building control by local government authorities.

The following definitions of terms used in this section are necessary for interpretation of the data presented.

*Private or government ownership.* A building is classified as 'private' or 'government' according to ownership at date of commencement. Thus 'government' includes buildings erected for Commonwealth and State Governments, semi-governmental and local government authorities, either by contractor or by day-labour, whether these buildings are for their own use or for rental or sale after completion. Houses erected for particular persons under government-sponsored home building schemes or with government financial assistance are classified as 'private'.

*Owner-built.* An 'owner-built' house is one actually erected or being erected by the owner or under the owner's direction without the services of a contractor who is responsible for the whole job.

*Contract-built.* Includes the operations of all building contractors and government authorities which undertake the erection of new buildings.

*Commenced.* A building is regarded as having been commenced when work on foundations has begun. Owing to the difficulty of defining the exact point that this represents in building operations, classifications made by informants may not be entirely uniform.

*Completed.* A building is regarded as having been completed when the contractor has fulfilled the terms of the contract. As with commencements, the classifications made may not be entirely uniform.

*Under construction.* A building is regarded as being under construction if it has been commenced but not completed, whether or not work on the building is actively proceeding.

*Values.* All values shown exclude the value of land and represent the estimated value of buildings on completion.

*Values of work done.* The values of work done during the period represent the estimated value of work actually carried out on buildings during the period. For any building the sum of these values obtained during its construction equals the value of the building on completion. Data relating to the value of work done on owner-built houses are not collected. However, the figures shown for the value of work done include a component relating to owner-built houses calculated on the basis of the figures collected for the value of owner-built houses commenced, completed and under construction.

*The values of work yet to be done on buildings under construction at the end of period* are the differences between the estimated total value of work done at the end of period and the estimated final value of the building on completion. They therefore represent the values of work which will be carried out in subsequent quarters on buildings already under construction.

*Type of building.* Classification is according to the function a building is intended to serve. A building which is ancillary to other buildings or forms part of a group of related buildings is classified according to the function of the group as a whole.

*Persons working.* Figures relate to persons working on the jobs of contractors who undertake the erection of new buildings and of government authorities which erect new buildings on their own account. They include persons working on alterations, additions, repairs and maintenance when these jobs are undertaken by such contractors and authorities. Contractors are asked to give details of all persons working on their jobs *on a specified day*, including working principals, men working as or for sub-contractors and men temporarily laid off on account of weather. Because of the intermittent employment of various types of sub-contractors on any particular job, it is sometimes difficult for contractors and authorities to provide precise particulars of the number of sub-contractors and the number of employees of sub-contractors working on their jobs on the specified day. This factor may cause some estimation by persons completing returns and some degree of understatement in figures shown in tables. On the other hand, because of frequent movement between jobs of some types of tradesmen (such as electricians) who may work on several jobs on the one day, a small element of duplication may occur. The figures *exclude* persons working on owner-built houses, and employees of builders who undertake only alterations, additions, repairs and maintenance.

#### New houses approved, commenced, completed and under construction

The next table provides a summary for 1969-70 of the number of new houses approved, commenced, completed and under construction in each State and Territory. For a graph showing the number of new houses commenced, completed and under construction for the period 1960-61 to 1969-70 see plate 23, page 197.

NEW HOUSES: NUMBER, STATES AND TERRITORIES, 1969-70

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Approved . . .	31,642	25,588	15,113	8,010	13,965	2,655	1,506	3,169	101,648
Commenced . . .	30,233	24,575	14,466	7,940	12,999	2,682	850	3,176	96,921
Completed . . .	29,679	24,702	14,699	7,504	13,933	2,861	954	3,192	97,524
Under construction at end of year . . .	13,025	10,960	3,329	3,713	5,115	1,163	692	1,522	39,519



The following table shows the number of *new houses approved* in each State or Territory, according to *private and government ownership*, during the years 1965-66 to 1969-70.

**NEW HOUSES APPROVED, BY OWNERSHIP: NUMBER, STATES AND TERRITORIES  
1965-66 TO 1969-70**

<i>Year</i>			<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>PRIVATE</b>											
1965-66	.	.	23,481	18,572	10,376	6,687	5,537	1,837	84	1,318	67,892
1966-67	.	.	23,666	20,068	11,331	5,495	7,127	2,500	91	1,458	71,736
1967-68	.	.	26,478	20,998	11,958	4,925	10,030	2,393	131	1,374	78,287
1968-69	.	.	28,102	22,357	12,443	5,704	12,912	2,206	224	1,889	85,837
1969-70	.	.	27,496	23,538	13,371	6,335	12,280	2,123	599	2,236	87,978
<b>GOVERNMENT</b>											
1965-66	.	.	3,116	1,889	1,526	2,470	1,892	591	492	709	12,685
1966-67	.	.	4,737	1,602	1,804	1,632	1,585	718	428	1,155	13,661
1967-68	.	.	2,873	1,320	1,494	942	1,889	916	676	590	10,700
1968-69	.	.	4,226	1,969	1,856	2,082	1,567	488	633	1,009	13,830
1969-70	.	.	4,146	2,050	1,742	1,675	1,685	532	907	933	13,670
<b>TOTAL</b>											
1965-66	.	.	26,597	20,461	11,902	9,157	7,429	2,428	576	2,027	80,577
1966-67	.	.	28,403	21,670	13,135	7,127	8,712	3,218	519	2,613	85,397
1967-68	.	.	29,351	22,318	13,452	5,867	11,919	3,309	807	1,964	88,987
1968-69	.	.	32,328	24,326	14,299	7,786	14,479	2,694	857	2,898	99,667
1969-70	.	.	31,642	25,588	15,113	8,010	13,965	2,655	1,506	3,169	101,648

The number of *new houses commenced* in each State and Territory by *contractors and owner-builders* during the years 1965-66 to 1969-70 is shown in the following table.

**NEW HOUSES COMMENCED, CONTRACT-BUILT OR OWNER-BUILT  
NUMBER, STATES AND TERRITORIES, 1965-66 TO 1969-70**

<i>Year</i>			<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>CONTRACT-BUILT(a)</b>											
1965-66	.	.	20,704	17,587	10,650	8,826	6,647	1,576	484	1,945	68,419
1966-67	.	.	22,466	18,330	10,802	7,843	7,626	2,170	475	2,088	71,800
1967-68	.	.	22,530	18,858	11,913	6,311	10,282	2,181	708	2,326	75,109
1968-69	.	.	26,465	20,334	12,930	6,881	12,464	1,747	820	2,784	84,425
1969-70	.	.	26,155	21,352	13,373	7,542	11,716	1,877	754	3,128	85,897
<b>OWNER-BUILT</b>											
1965-66	.	.	3,864	2,943	1,416	569	930	626	30	167	10,545
1966-67	.	.	3,362	2,760	1,504	529	913	782	91	117	10,058
1967-68	.	.	3,675	3,050	1,375	441	1,190	961	55	63	10,810
1968-69	.	.	3,905	3,246	1,250	331	1,384	833	103	87	11,139
1969-70	.	.	4,078	3,223	1,093	398	1,283	805	96	48	11,024
<b>TOTAL</b>											
1965-66	.	.	24,568	20,530	12,066	9,395	7,577	2,202	514	2,112	78,964
1966-67	.	.	25,828	21,090	12,306	8,372	8,539	2,952	566	2,205	81,858
1967-68	.	.	26,205	21,908	13,288	6,752	11,472	3,142	763	2,389	85,919
1968-69	.	.	30,370	23,580	14,180	7,212	13,848	2,580	923	2,871	95,564
1969-70	.	.	30,233	24,575	14,466	7,940	12,999	2,682	850	3,176	96,921

(a) Includes operations of government authorities.

The following table shows the number of *new houses completed* in each State and Territory by *contractors and owner-builders* during the years 1965-66 to 1969-70.

**NEW HOUSES COMPLETED, CONTRACT-BUILT OR OWNER-BUILT  
NUMBER, STATES AND TERRITORIES, 1965-66 TO 1969-70**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>CONTRACT-BUILT(a)</b>									
1965-66 . . .	22,022	17,662	10,300	9,741	6,282	1,572	621	1,937	70,137
1966-67 . . .	21,216	19,149	10,675	8,739	7,398	1,850	265	1,861	71,153
1967-68 . . .	23,111	18,648	11,720	6,998	8,810	2,442	644	2,331	74,704
1968-69 . . .	24,360	19,390	12,857	6,574	11,616	1,905	674	2,436	79,812
1969-70 . . .	25,582	20,988	13,510	7,128	12,435	1,962	885	3,120	85,610
<b>OWNER-BUILT</b>									
1965-66 . . .	3,882	3,267	1,362	612	983	688	36	129	10,959
1966-67 . . .	3,563	2,977	1,602	615	874	915	92	169	10,807
1967-68 . . .	4,159	2,944	1,378	446	1,048	889	55	133	11,052
1968-69 . . .	4,434	3,341	1,411	380	1,224	799	66	79	11,734
1969-70 . . .	4,097	3,714	1,189	376	1,498	899	69	72	11,914

(a) Includes operations of government authorities.

The number of *new houses completed* in each State and Territory during the years 1965-66 to 1969-70, according to *private and government ownership*, is shown in the following table.

**NEW HOUSES COMPLETED, BY OWNERSHIP: NUMBER, STATES AND  
TERRITORIES, 1965-66 TO 1969-70**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>PRIVATE</b>									
1965-66 . . .	22,056	19,014	10,234	7,230	5,228	1,703	105	1,218	66,788
1966-67 . . .	21,343	19,558	10,711	6,252	6,676	2,138	153	1,336	68,167
1967-68 . . .	23,126	20,276	11,381	5,141	8,533	2,594	134	1,557	72,742
1968-69 . . .	25,503	21,334	12,548	5,110	11,007	1,969	156	1,612	79,239
1969-70 . . .	25,733	23,047	12,837	5,902	12,384	2,178	187	2,044	84,312
<b>GOVERNMENT</b>									
1965-66 . . .	3,848	1,915	1,428	3,123	2,037	557	552	848	14,308
1966-67 . . .	3,436	2,568	1,566	3,102	1,596	627	204	694	13,793
1967-68 . . .	4,144	1,316	1,717	2,303	1,325	737	565	907	13,014
1968-69 . . .	3,291	1,397	1,720	1,844	1,833	735	584	903	12,307
1969-70 . . .	3,946	1,655	1,862	1,602	1,549	683	767	1,148	13,212
<b>TOTAL</b>									
1965-66 . . .	25,904	20,929	11,662	10,353	7,265	2,260	657	2,066	81,096
1966-67 . . .	24,779	22,126	12,277	9,354	8,272	2,765	357	2,030	81,960
1967-68 . . .	27,270	21,592	13,098	7,444	9,858	3,331	699	2,464	85,756
1968-69 . . .	28,794	22,731	14,268	6,954	12,840	2,704	740	2,515	91,546
1969-70 . . .	29,679	24,702	14,699	7,504	13,933	2,861	954	3,192	97,524

The following tables show the number of *new houses completed* in each State and Territory during 1969-70 and in Australia during the years 1965-66 to 1969-70, classified according to the *material of their outer walls*.

**NEW HOUSES COMPLETED, BY MATERIAL OF OUTER WALLS: NUMBER  
STATES AND TERRITORIES, 1969-70**

<i>Materials of outer walls</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Brick, brick veneer, concrete and stone . . . .	19,171	21,696	6,575	6,849	11,830	1,892	618	3,185	71,816
Wood (weatherboard, etc.) . . . .	2,677	1,133	5,504	28	27	577	16	5	9,967
Asbestos-cement . . . .	7,652	1,796	2,385	606	2,054	137	287	2	14,919
Other . . . .	179	77	235	21	22	255	33	..	822
<b>Total . . . .</b>	<b>29,679</b>	<b>24,702</b>	<b>14,699</b>	<b>7,504</b>	<b>13,933</b>	<b>2,861</b>	<b>954</b>	<b>3,192</b>	<b>97,524</b>

**NEW HOUSES COMPLETED, BY MATERIAL OF OUTER WALLS: NUMBER  
AUSTRALIA, 1965-66 TO 1969-70**

<i>Material of outer walls</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Brick, brick veneer, concrete and stone . . . .	52,148	54,116	57,506	64,696	71,816
Wood (weatherboard, etc.) . . . .	12,247	11,294	11,633	10,554	9,967
Asbestos-cement . . . .	16,027	15,581	15,820	15,525	14,919
Other . . . .	674	969	797	771	822
<b>Total . . . .</b>	<b>81,096</b>	<b>81,960</b>	<b>85,756</b>	<b>91,546</b>	<b>97,524</b>

The number of *new houses under construction* at the end of each year 1965-66 to 1969-70 in each State and Territory is shown in the following table.

**NEW HOUSES UNDER CONSTRUCTION: NUMBER, STATES AND TERRITORIES  
1965-66 TO 1969-70**

<i>At end of year—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1965-66 . . . .	11,515	11,459	3,431	4,851	3,257	1,542	348	1,101	37,504
1966-67 . . . .	12,564	10,423	3,460	3,869	3,524	1,729	557	1,276	37,402
1967-68 . . . .	11,499	10,713	3,650	3,151	5,123	1,538	621	1,201	37,496
1968-69 . . . .	13,075	11,290	3,562	3,366	6,104	1,372	804	1,547	41,120
1969-70 . . . .	13,025	10,960	3,329	3,713	5,115	1,163	692	1,522	39,519

**New flats approved, commenced, completed and under construction**

The following table shows the number of new flats approved, commenced, completed and under construction for the year 1969-70. For a graph showing the number of new flats commenced, completed and under construction for the period 1960-61 to 1969-70 see plate 24, page 200.

**NEW FLATS: NUMBER, STATES AND TERRITORIES, 1969-70**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Approved . . . .	23,317	14,781	2,807	4,496	6,672	781	1,028	401	54,283
Commenced . . . .	21,471	13,505	2,438	3,526	5,839	641	350	288	48,058
Completed . . . .	18,774	13,992	2,436	2,657	5,596	502	471	260	44,688
Under construction at end of year . . . .	13,122	8,399	898	2,036	4,466	384	249	303	29,857



# NEW HOUSES: AUSTRALIA

1960-61 TO 1969-70

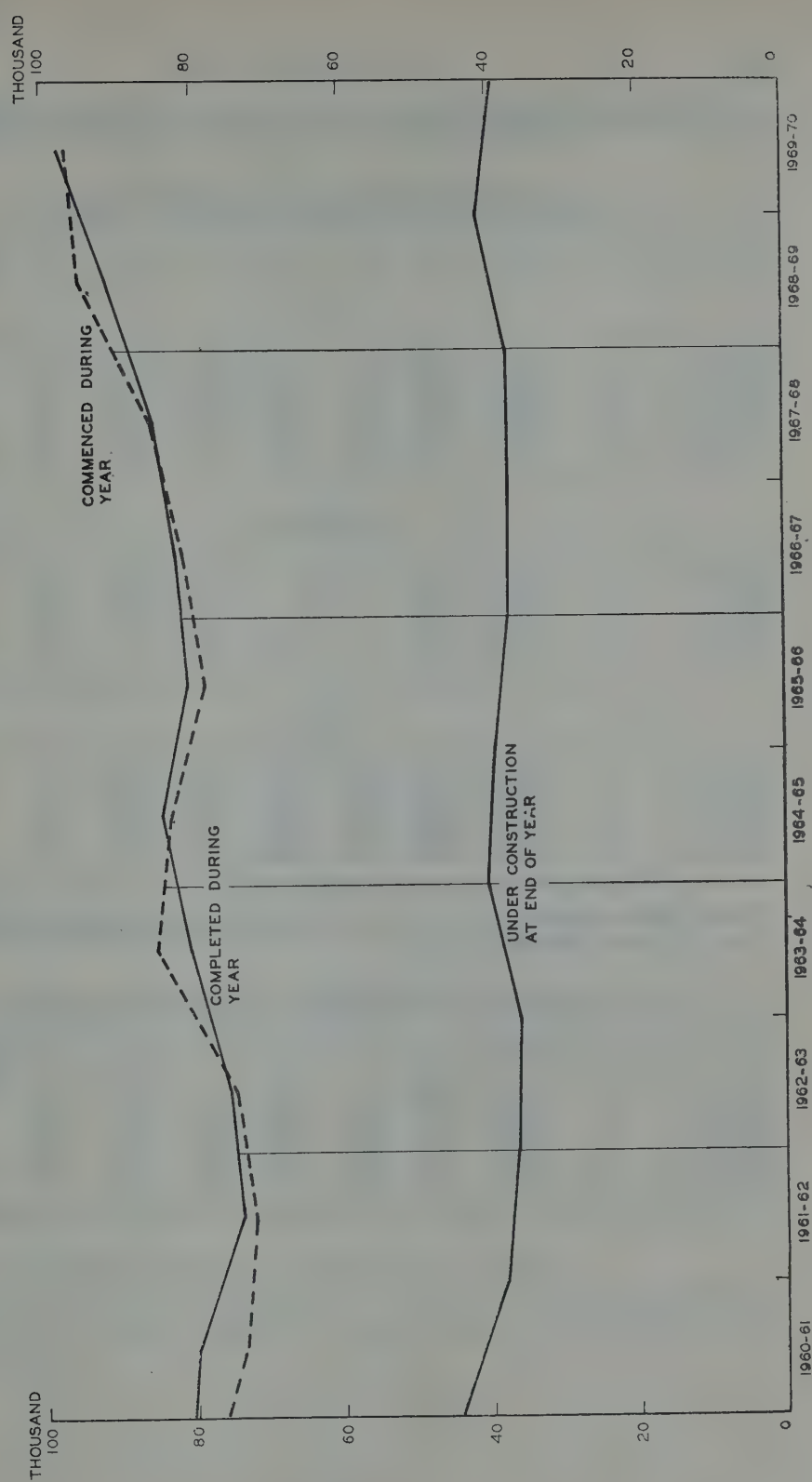


PLATE 23

The following table shows the number of *new flats approved* in each State or Territory during the years 1965-66 to 1969-70 according to *private and government ownership*.

**NEW FLATS APPROVED, BY OWNERSHIP  
NUMBER, STATES AND TERRITORIES, 1965-66 TO 1969-70**

<i>Year</i>			<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
PRIVATE											
1965-66	.	.	11,603	8,235	3,838	1,778	1,761	198	135	154	27,702
1966-67	.	.	12,544	11,495	3,766	1,355	2,708	209	156	190	32,423
1967-68	.	.	17,028	14,894	2,853	1,835	3,094	346	475	36	40,561
1968-69	.	.	21,258	13,134	2,474	2,419	5,493	432	381	299	45,890
1969-70	.	.	22,228	13,437	2,807	4,422	5,349	723	826	293	50,085
GOVERNMENT											
1965-66	.	.	1,049	772	14	..	12	20	38	..	1,905
1966-67	.	.	1,376	1,443	20	..	27	18	225	8	3,117
1967-68	.	.	1,030	1,288	6	17	106	79	54	..	2,580
1968-69	.	.	972	939	14	172	699	6	102	..	2,904
1969-70	.	.	1,089	1,344	..	74	1,323	58	202	108	4,198
TOTAL											
1965-66	.	.	12,652	9,007	3,852	1,778	1,773	218	173	154	29,607
1966-67	.	.	13,920	12,938	3,786	1,355	2,735	227	381	198	35,540
1967-68	.	.	18,058	16,182	2,859	1,852	3,200	425	529	36	43,141
1968-69	.	.	22,230	14,073	2,488	2,591	6,192	438	483	299	48,794
1969-70	.	.	23,317	14,781	2,807	4,496	6,672	781	1,028	401	54,283

The number of *new flats commenced* in each State or Territory during the years 1965-66 to 1969-70 is shown in the following table.

**NEW FLATS COMMENCED: NUMBER, STATES AND TERRITORIES, 1965-66 TO 1969-70**

<i>Year</i>			<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1965-66	.	.	12,468	8,549	3,636	1,547	1,550	211	116	163	28,240
1966-67	.	.	13,145	11,987	3,662	1,321	2,455	186	308	194	33,258
1967-68	.	.	14,369	14,399	2,997	1,561	3,172	367	305	28	37,198
1968-69	.	.	18,416	14,117	2,586	2,100	5,366	364	488	301	43,738
1969-70	.	.	21,471	13,505	2,438	3,526	5,839	641	350	288	48,058

The following table shows the number of *new flats completed* in each State and Territory during the years 1965-66 to 1969-70, according to *private and government ownership*.

**NEW FLATS COMPLETED, BY OWNERSHIP**  
**NUMBER, STATES AND TERRITORIES, 1965-66 TO 1969-70**

<i>Year</i>		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
PRIVATE										
1965-66	. . .	12,822	8,486	2,952	1,797	1,547	205	51	386	28,246
1966-67	. . .	10,853	9,218	4,004	1,482	1,730	153	85	152	27,677
1967-68	. . .	12,770	11,635	3,161	1,350	2,382	219	163	167	31,847
1968-69	. . .	15,231	12,921	2,843	1,711	3,337	352	254	74	36,723
1969-70	. . .	17,901	12,672	2,434	2,612	4,915	490	338	259	41,621
GOVERNMENT										
1965-66	. . .	2,040	1,020	12	59	77	16	74	126	3,424
1966-67	. . .	1,235	920	14	..	12	32	42	..	2,255
1967-68	. . .	1,338	1,051	20	23	10	73	48	4	2,567
1968-69	. . .	1,131	854	20	30	154	14	215	..	2,418
1969-70	. . .	873	1,320	2	45	681	12	133	1	3,067
TOTAL										
1965-66	. . .	14,862	9,506	2,964	1,856	1,624	221	125	512	31,670
1966-67	. . .	12,088	10,138	4,018	1,482	1,742	185	127	152	29,932
1967-68	. . .	14,108	12,686	3,181	1,373	2,392	292	211	171	34,414
1968-69	. . .	16,362	13,775	2,863	1,741	3,491	366	469	74	39,141
1969-70	. . .	18,774	13,992	2,436	2,657	5,596	502	471	260	44,688

The number of *new flats under construction* at the end of each year 1965-66 to 1969-70 in each State and Territory is shown in the table below.

**NEW FLATS UNDER CONSTRUCTION**  
**NUMBER, STATES AND TERRITORIES, 1965-66 TO 1969-70**

<i>At end of year—</i>		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1965-66	. . .	7,312	5,374	1,713	754	876	178	123	139	16,469
1966-67	. . .	8,369	7,223	1,357	593	1,589	179	304	181	19,795
1967-68	. . .	8,630	8,914	1,173	798	2,369	254	398	38	22,574
1968-69	. . .	10,684	9,158	896	1,155	4,237	246	417	267	27,060
1969-70	. . .	13,122	8,399	898	2,036	4,466	384	249	303	29,857

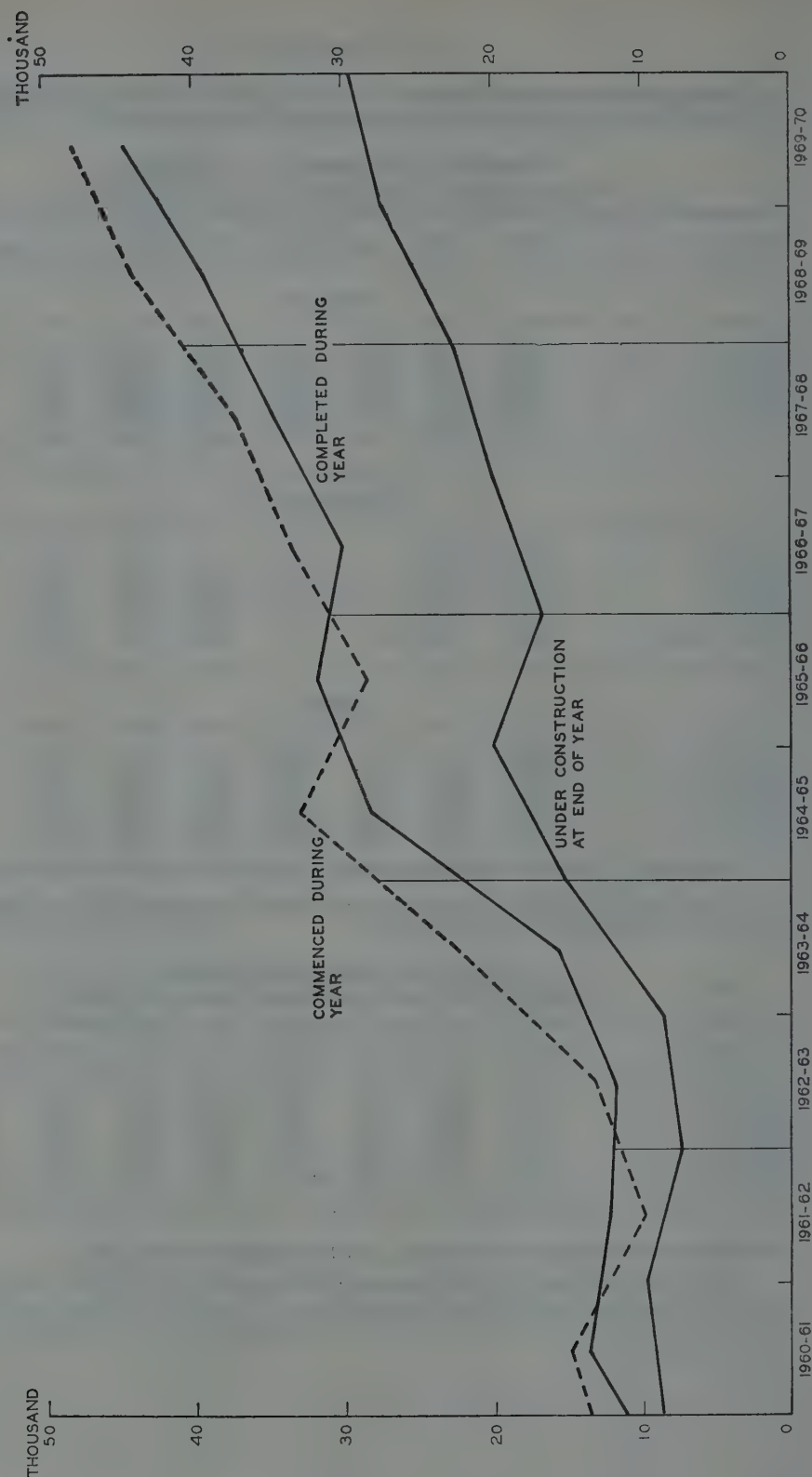
**Value of new buildings approved, commenced, completed and under construction**

The following table summarises, for the years 1965-66 to 1969-70, the values of all new buildings approved, commenced, completed, under construction, the value of work done, and the value of work yet to be done in each State and Territory. For explanation of the breaks in series in the following table *see* pages 192-3.



# NEW FLATS: AUSTRALIA

1960-61 TO 1969-70



**NEW BUILDINGS: VALUE, STATES AND TERRITORIES, 1965-66 TO 1969-70**  
(\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>APPROVED</b>									
1965-66	490,235	458,608	227,756	133,840	122,572	46,901	14,765	44,903	1,539,580
1966-67	597,416	494,050	219,283	116,623	162,937	53,955	17,604	60,594	1,722,462
1967-68	689,070	516,339	268,894	148,672	240,792	72,018	28,488	44,168	2,008,441
1968-69	802,479	560,671	266,056	145,872	305,594	52,289	28,048	71,256	2,232,265
1969-70	975,091	684,134	306,010	189,052	380,681	59,539	68,434	103,384	2,766,325
<b>COMMENCED</b>									
1965-66	558,427	450,737	225,553	145,997	130,982	43,789	15,405	49,935	1,620,825
1966-67	604,641	509,892	231,776	130,268	169,457	62,077	17,807	54,762	1,780,680
1967-68	689,372	504,864	280,536	129,004	242,305	63,152	25,696	54,869	1,989,798
1968-69	793,388	575,994	268,821	150,145	297,684	56,200	29,901	65,015	2,237,148
1969-70	975,115	674,588	283,734	181,999	361,594	62,131	44,025	98,638	2,681,824
<b>COMPLETED</b>									
1965-66	583,236	415,375	209,306	160,301	130,178	39,680	12,065	57,566	1,607,707
1966-67	625,956	471,943	219,098	135,221	162,135	48,218	13,243	57,582	1,733,396
1967-68	638,958	497,370	256,974	138,531	195,403	61,885	20,295	56,268	1,865,684
1968-69	721,504	578,126	271,264	156,712	254,833	56,948	25,926	71,348	2,136,661
1969-70	808,202	629,109	311,079	147,638	303,396	66,452	43,406	73,036	2,382,318
<b>UNDER CONSTRUCTION AT END OF YEAR</b>									
1965-66	473,627	369,747	133,544	120,662	90,982	37,412	14,816	59,615	1,300,405
1966-67	460,701	422,577	150,432	118,940	100,119	51,269	19,811	59,141	1,382,990
1967-68	521,357	443,905	176,917	112,356	148,846	52,506	25,205	60,476	1,541,568
1968-69	604,977	451,906	177,913	108,939	194,278	51,896	29,121	54,150	1,673,180
1969-70	792,249	514,808	154,994	145,486	256,543	51,022	29,668	82,615	2,027,385
<b>VALUE OF WORK DONE DURING YEAR</b>									
1965-66	614,477	442,402	221,780	156,762	133,483	43,201	13,749	55,308	1,681,162
1966-67	597,044	487,403	231,768	143,587	163,726	53,098	16,635	52,163	1,745,424
1967-68	639,226	525,750	255,345	137,506	212,437	60,058	22,510	61,515	1,914,347
1968-69	762,546	580,374	287,704	144,297	270,012	58,785	27,746	63,886	2,195,350
1969-70	905,973	645,477	306,270	165,540	342,942	68,428	43,557	78,486	2,556,673
<b>VALUE OF WORK YET TO BE DONE ON BUILDINGS UNDER CONSTRUCTION AT END OF YEAR</b>									
1965-66	220,108	190,575	67,280	66,995	45,081	18,465	8,634	25,907	643,045
1966-67	236,050	227,947	71,498	56,907	52,627	27,442	10,237	30,852	713,560
1967-68	297,625	220,897	99,612	51,348	84,372	30,506	13,416	26,940	824,715
1968-69	340,542	226,647	84,167	60,346	115,335	28,060	15,512	28,076	898,685
1969-70	433,081	275,232	66,088	78,600	139,430	25,677	17,098	51,395	1,086,601

The following tables show the value of *all new buildings completed* in each State and Territory during 1969-70 and in Australia during the years 1965-66 to 1969-70, according to the *type of building*.

**NEW BUILDINGS COMPLETED, BY TYPE OF BUILDING: VALUE**  
STATES AND TERRITORIES, 1969-70  
(\$'000)

<i>Type of building</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Houses—</b>									
Brick, brick veneer, concrete and stone	244,818	240,614	77,008	68,238	130,840	20,755	8,688	39,403	830,364
Wood (weatherboard, etc.)	24,379	8,949	45,774	205	353	4,071	397	62	84,190
Asbestos-cement	57,858	11,689	19,695	4,330	19,797	641	4,158	22	118,190
Other	1,455	648	1,915	126	307	2,816	537	..	7,804
Total, houses	328,509	261,899	144,389	72,898	151,299	28,283	13,779	39,487	1,040,543
Flats	151,878	101,953	18,130	16,007	40,519	3,887	4,337	2,173	338,884
<i>Total, houses and flats</i>	<i>480,387</i>	<i>363,851</i>	<i>162,519</i>	<i>88,905</i>	<i>191,818</i>	<i>32,170</i>	<i>18,116</i>	<i>41,660</i>	<i>1,379,426</i>
Hotels, hostels, etc.	20,799	16,283	14,188	2,974	14,815	2,107	2,051	680	73,897
Shops	23,098	23,808	20,951	6,176	7,502	2,348	1,300	801	85,984
Factories	78,452	67,104	16,257	7,945	16,615	6,322	2,880	1,086	196,661
Offices	52,469	35,638	24,878	6,870	14,295	5,291	3,973	13,818	157,232
Other business premises	35,433	33,186	18,457	9,966	15,968	1,753	1,557	1,851	118,171
Education	50,221	39,781	25,082	11,535	13,296	6,469	5,290	9,582	161,256
Religion	4,037	3,108	2,164	807	995	537	..	180	11,828
Health	21,959	21,367	7,658	8,067	5,949	4,965	924	458	71,347
Entertainment and recreation	20,949	9,807	4,009	1,337	6,033	925	351	1,040	44,451
Miscellaneous	20,398	15,176	14,915	3,057	16,109	3,566	6,967	1,882	82,070
<i>Total, other buildings</i>	<i>327,813</i>	<i>265,257</i>	<i>148,560</i>	<i>58,733</i>	<i>111,578</i>	<i>34,282</i>	<i>25,290</i>	<i>31,375</i>	<i>1,002,888</i>
<b>Total, new buildings</b>	<b>808,202</b>	<b>629,109</b>	<b>311,079</b>	<b>147,638</b>	<b>303,396</b>	<b>66,452</b>	<b>43,406</b>	<b>73,036</b>	<b>2,382,318</b>

**NEW BUILDINGS COMPLETED, BY TYPE OF BUILDING: VALUE**  
AUSTRALIA, 1965-66 TO 1969-70  
(\$'000)

<i>Type of building</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
<b>Houses—</b>					
Brick, brick veneer, concrete and stone	490,492	537,653	598,159	705,906	830,364
Wood (weatherboard, etc.)	89,318	85,471	89,686	85,903	84,190
Asbestos-cement	99,078	103,542	109,414	116,030	118,190
Other	5,005	8,230	6,603	7,033	7,804
Total, houses	683,893	734,896	803,864	914,871	1,040,543
Flats	185,997	179,891	218,894	267,262	338,884
<i>Total, houses and flats</i>	<i>869,890</i>	<i>914,787</i>	<i>1,022,758</i>	<i>1,182,133</i>	<i>1,379,426</i>
Hotels, hostels, etc.	31,279	51,145	47,898	55,454	73,897
Shops	68,396	76,462	60,239	77,321	85,984
Factories	167,867	164,588	162,186	190,520	196,661
Offices	103,867	144,245	169,841	158,191	157,232
Other business premises	66,832	76,136	73,416	98,823	118,171
Education	141,566	128,492	144,998	161,402	161,256
Religion	15,001	14,124	13,145	16,132	11,828
Health	54,460	51,106	49,703	56,200	71,347
Entertainment and recreation	28,797	42,309	33,942	41,924	44,451
Miscellaneous	59,752	70,002	87,561	98,561	82,070
<i>Total, other buildings</i>	<i>737,817</i>	<i>818,609</i>	<i>842,927</i>	<i>954,529</i>	<i>1,002,888</i>
<b>Total, new buildings</b>	<b>1,607,707</b>	<b>1,733,396</b>	<b>1,865,684</b>	<b>2,136,661</b>	<b>2,382,318</b>



The following table shows the value of *all new buildings completed* in Australia during the years 1967-68 to 1969-70, classified by *type of building and private and government ownership*.

**NEW BUILDINGS COMPLETED, BY TYPE OF BUILDING AND OWNERSHIP: VALUE  
AUSTRALIA, 1967-68 TO 1969-70  
(\$'000)**

Type of building	Private			Government		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Houses—						
Brick, brick veneer, concrete and stone . . . . .	553,158	658,525	769,971	45,002	47,381	60,395
Wood (weatherboard, etc.) . . . . .	75,857	71,456	68,088	13,829	14,446	16,101
Asbestos-cement . . . . .	77,138	84,469	85,401	32,276	31,560	32,787
Other . . . . .	4,588	5,262	5,284	2,014	1,772	2,519
Total, houses . . . . .	710,741	819,709	928,741	93,122	95,161	111,802
Flats . . . . .	198,989	249,369	313,677	19,905	17,895	25,207
Total, houses and flats . . . . .	909,731	1,069,079	1,242,417	113,027	113,056	137,011
Hotels, hostels, etc. . . . .	45,472	45,287	64,856	2,426	10,167	9,043
Shops . . . . .	59,624	76,447	84,570	615	875	1,416
Factories . . . . .	151,072	163,043	184,573	11,114	27,480	12,090
Offices . . . . .	105,357	106,440	105,412	64,485	51,751	51,818
Other business premises . . . . .	47,316	63,528	66,638	26,100	35,293	51,534
Education . . . . .	24,902	24,375	28,702	120,097	137,025	132,553
Religion . . . . .	13,145	16,132	11,828	..	..	..
Health . . . . .	7,624	10,917	14,775	42,079	45,285	56,574
Entertainment and recreation . . . . .	27,703	32,017	34,738	6,239	9,907	9,713
Miscellaneous . . . . .	26,637	30,415	35,882	60,924	68,145	46,186
Total, other buildings . . . . .	508,848	568,603	631,969	334,079	385,925	370,921
Total, new buildings . . . . .	1,418,579	1,637,680	1,874,386	447,105	498,980	507,932

**Value of building approved**

The following table shows the values of approvals for houses and flats, other new buildings, and alterations and additions in Australia for the years 1965-66 to 1969-70. Before 1 July 1966 additions of \$10,000 and over were included with new buildings in all States except New South Wales, where they were included in 'alterations and additions'. From 1 July 1966 alterations and or additions of \$10,000 and over are included with new buildings in all States.

**BUILDING APPROVED: VALUE, AUSTRALIA, 1965-66 TO 1969-70  
(\$'000)**

Type of building	1965-66	1966-67	1967-68	1968-69	1969-70
Houses and flats . . . . .	836,861	953,587	1,099,733	1,314,645	1,485,617
Other new buildings . . . . .	702,719	768,875	908,708	917,620	1,280,708
Total, new buildings . . . . .	1,539,580	1,722,462	2,008,441	2,232,265	2,766,325
Alterations and additions . . . . .	195,182	134,805	143,436	156,096	168,810
Total, building . . . . .	1,734,762	1,857,267	2,151,877	2,388,361	2,935,135
Private . . . . .	1,314,673	1,397,455	1,614,157	1,902,675	2,317,867
Government . . . . .	420,089	459,812	537,720	485,686	617,268

**Persons working on jobs carried out by builders of new buildings**

The following table shows the number of contractors, sub-contractors and wage earners working on jobs *carried out by builders of new buildings* in each State and Territory at 30 June 1970. It also shows the numbers of these persons classified according to their main building occupations and the type of building on which they were working.

**PERSONS WORKING ON JOBS CARRIED OUT BY BUILDERS OF NEW BUILDINGS  
STATES AND TERRITORIES, 30 JUNE 1970**

INCLUDING CONTRACTOR AND SUB-CONTRACTOR PRINCIPALS ACTUALLY WORKING ON JOBS  
BUT EXCLUDING PERSONS WORKING ON OWNER-BUILT HOUSES

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Contractors . . . . .	4,832	3,340	1,634	549	673	330	79	372	11,809
Sub-contractors . . . . .	12,090	11,092	3,826	3,304	3,132	763	290	1,208	35,705
Wage earners . . . . .	41,006	30,758	18,160	9,429	15,788	4,400	1,299	3,733	124,573
Carpenters . . . . .	17,736	14,845	9,425	3,204	5,114	2,172	476	1,438	54,410
Bricklayers . . . . .	7,491	6,026	2,108	2,117	2,463	510	134	691	21,540
Painters . . . . .	4,554	3,969	1,871	1,145	1,611	427	134	535	14,246
Electricians . . . . .	3,676	2,861	1,251	893	1,364	295	89	283	10,712
Plumbers . . . . .	5,378	4,370	1,983	1,240	1,695	347	126	387	15,526
Builders' labourers . . . . .	8,568	5,759	3,458	1,757	3,171	978	344	691	24,726
Other . . . . .	10,525	7,360	3,524	2,926	4,175	764	365	1,288	30,927
New houses and flats . . . . .	29,324	22,222	10,608	6,797	9,328	2,050	667	2,723	83,719
Other new buildings(a) . . . . .	25,244	21,882	12,406	6,249	8,943	3,136	956	2,259	81,075
Repairs and maintenance(b) . . . . .	3,360	1,086	606	236	1,322	307	45	331	7,293
Total . . . . .	57,928	45,190	23,620	13,282	19,593	5,493	1,668	5,313	172,087

(a) Includes persons working on alterations and additions carried out by builders of new buildings. (b) Carried out by builders of new buildings.

The number of persons in each State and Territory working on jobs *carried out by builders of new buildings* at the end of June of each year 1966 to 1970 is shown in the following table.

**PERSONS WORKING ON JOBS CARRIED OUT BY BUILDERS OF NEW BUILDINGS  
STATES AND TERRITORIES, JUNE 1966 TO 1970**

INCLUDING CONTRACTOR AND SUB-CONTRACTOR PRINCIPALS ACTUALLY WORKING ON JOBS  
BUT EXCLUDING PERSONS WORKING ON OWNER-BUILT HOUSES

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
30 June 1966 . . . . .	50,368	42,305	23,305	13,506	12,348	5,350	863	4,525	152,570
30 " 1967 . . . . .	46,608	42,931	22,454	12,467	14,505	6,354	1,054	4,474	150,847
28 " 1968 . . . . .	50,415	45,458	23,709	11,370	16,812	6,129	1,566	4,632	160,091
30 " 1969 . . . . .	55,909	46,462	26,077	12,019	19,201	5,618	1,662	4,534	171,482
30 " 1970 . . . . .	57,928	45,190	23,620	13,282	19,593	5,493	1,668	5,313	172,087

## Government activities in the housing field

### Housing Agreements between Commonwealth and State Governments

Under the Commonwealth-State Housing Agreements the Commonwealth Government makes substantial long-term loans to the States for the provisions of housing.

*The 1945 Agreement.* In November 1945 the Commonwealth Government entered into an Agreement with the Governments of the States whereby the Commonwealth Government would provide finance for, and the State Governments would undertake the building of, housing projects. Between 1945-46 and 1955-56, under this Agreement, the Commonwealth Government advanced to the States a total of \$481,118,000.

Initially, dwellings constructed under the 1945 Agreement were only sold to tenants if the tenant was able to arrange payment of the full purchase price to the State immediately on sale. Subsequent amendments to the Agreement progressively eased conditions of sale. For information on the conditions of sale, etc., under the 1945 Agreement see Year Book No. 48, page 367.

*The 1956 Agreement.* In 1956 the Commonwealth and the States entered into a new Agreement under which added emphasis was placed on the construction of dwellings for private ownership. The Agreement provided that parts of the loans advanced to each State were to be advanced to building societies and other approved institutions for lending to private home builders and

purchasers. The balance of the amounts advanced to each State was used by the States for the erection of dwellings for either rental or sale. The Commonwealth was entitled to specify that up to five per cent of the moneys allocated for the erection of dwellings by the State be set aside for the erection of dwellings for serving members of the defence forces. For features of the 1956 Commonwealth and State Housing Agreement see Year Book No. 48, pages 367-8.

*The 1961 Agreement.* The period during which Commonwealth advances to the States could be made under the 1956 Agreement terminated on 30 June 1961. A new Agreement was entered into which extended for a further five years the period during which advances could be made and also amended the 1956 Agreement in certain respects concerning funds for the erection of dwellings for rental to servicemen and the rate of interest payable on Commonwealth advances.

*The 1966 Agreement.* A new Agreement was entered into which extended for a further five years the period during which advances could be made, and also amended the 1956-1961 Agreement in certain respects concerning the definition of 'member of the forces', the erection by the States of blocks of flats in metropolitan areas, the erection of dwellings for rental to servicemen, and the provision of finance to home builders in rural areas.

For further information regarding the above Agreements see Year Book No. 53, pages 276-7.

### Operations under the various Housing Agreements

The following tables show the operations under the various Housing Agreements during 1969-70 and to 30 June 1970. The earliest single year for which details are given in the tables is 1965-66; for earlier years see Year Book No. 53, pages 278-9.

#### COMMONWEALTH AND STATE HOUSING AGREEMENTS: SUMMARY, 1969-70

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
ADVANCES TO STATES (\$'000)							
Advances to States(a)	49,711	36,733	13,989	21,250	12,373	7,635	141,691
State Housing Programme(b)	32,550	24,650	6,916	9,750	8,050	5,320	87,236
Home Builders' Account—							
Advances(c)	13,950	10,850	2,964	11,500	3,450	2,280	44,994
Amounts drawn by institutions	21,420	15,899	4,721	12,995	3,543	2,941	61,519
Service Housing Funds allocated by—							
Commonwealth	3,211	1,233	4,109	..	873	35	9,461
States	1,627	1,233	346	..	402	35	3,643
NUMBER OF DWELLINGS							
State Housing Programme—							
Commenced	4,272	2,937	1,459	1,782	1,560	563	12,573
Completed	3,892	2,650	1,456	1,136	1,092	536	10,762
Under construction at 30 June 1970	3,103	2,232	627	1,455	1,255	213	8,885
Home Builders' Account—							
Purchased—							
New	800	397	212	864	204	125	2,602
Other	224	..	..	..	..	72	296
New construction—							
Approved	1,544	753	358	1,466	241	235	4,597
Commenced	1,081	954	348	1,435	232	219	4,269
Completed	1,115	1,228	386	1,419	266	265	4,679
Service Housing—							
Agreed programme	812	380	203	..	100	6	1,501
Completed(d)	164	160	439	..	149	5	917
Sold under—							
1945 Agreement	379	437	133	15	157	(e) ..	(e)1,121
1956 to 1966 Agreements	1,762	1,189	496	639	200	422	4,708

(a) Includes supplementary advances for Service Housing. (b) The maximum amount is 70 per cent of the Commonwealth advances, other than supplementary advances for Service Housing. (c) The minimum amount must be 30 per cent of the Commonwealth advances other than supplementary advances for Service Housing. (d) Also included in State Housing Programme above. (e) Tasmania did not operate under the 1945 Agreement after August 1950.



**COMMONWEALTH AND STATE HOUSING AGREEMENTS: ADVANCES TO STATES(a)  
1965-66 TO 1969-70 AND TO 30 JUNE 1970  
(\$'000)**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.(b)	Total
1965-66 . . .	44,375	33,567	8,950	21,057	8,846	7,448	124,243
1966-67 . . .	43,325	32,960	13,740	20,750	9,478	7,500	127,753
1967-68 . . .	44,610	33,766	12,627	21,000	11,241	6,700	129,944
1968-69 . . .	45,308	36,038	12,146	19,500	12,394	7,511	132,897
1969-70 . . .	49,711	36,733	13,989	21,250	12,373	7,635	141,691
<b>Total from 1 July 1945 . . .</b>	<b>669,049</b>	<b>566,772</b>	<b>179,295</b>	<b>251,929</b>	<b>168,093</b>	<b>86,397</b>	<b>1,921,535</b>

(a) Includes supplementary advances (Service Housing) under the 1956 to 1966 Agreements. from the 1945 Agreement in August 1950 and repaid all advances made to it.

(b) Tasmania withdrew

**COMMONWEALTH AND STATE HOUSING AGREEMENTS: NUMBER OF DWELLINGS PROVIDED(a), STATES, 1965-66 TO 1969-70 AND TO 30 JUNE 1970**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.(b)	Total
1965-66 . . .	6,385	4,248	1,812	3,569	1,435	942	18,391
1966-67 . . .	5,866	5,156	1,738	4,029	1,128	1,025	18,942
1967-68 . . .	6,548	4,739	1,782	3,614	1,290	1,049	19,022
1968-69 . . .	5,739	4,213	1,850	2,834	1,370	1,024	17,030
1969-70 . . .	6,023	4,275	2,054	3,419	1,562	998	18,331
<b>Total from 1 July 1945(c) . . .</b>	<b>113,572</b>	<b>87,376</b>	<b>32,344</b>	<b>46,850</b>	<b>29,822</b>	<b>12,453</b>	<b>322,417</b>

(a) The total number of houses and flats completed under State Housing Programmes plus, since 30 June 1956, the numbers completed and purchased under the Home Builders' Account. (b) Tasmania withdrew from the 1945 Agreement in August 1950 and repaid all advances made to it. (c) Includes some dwellings erected before 1945-46 to which the 1945 Agreement applied and also 1,130 dwellings completed in Tasmania up to the time of that State's withdrawal from the 1945 Agreement in August 1950.

**COMMONWEALTH AND STATE HOUSING AGREEMENTS: NUMBER OF HOUSES SOLD  
1965-66 TO 1969-70 AND TO 30 JUNE 1970**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
1965-66 . . .	1,919	2,221	501	886	203	464	6,194
1966-67 . . .	1,502	1,859	598	1,002	567	385	5,913
1967-68 . . .	1,872	1,794	504	813	481	520	5,984
1968-69 . . .	1,630	1,404	428	640	357	526	4,985
1969-70 . . .	2,141	1,626	629	654	357	422	5,829
<b>Total from 1 July 1948 . . .</b>	<b>34,382</b>	<b>28,968</b>	<b>9,387</b>	<b>6,646</b>	<b>7,438</b>	<b>5,442</b>	<b>92,263</b>

**War service homes**

The *War Service Homes Act* 1918-1968 makes provision for assistance to be granted to persons who satisfy the eligibility conditions set out in the Act, to enable them to acquire on concessional terms a soundly constructed home that they would occupy as a residence.

Persons eligible for assistance under the Act include members of the Australian forces and nursing services enlisted or appointed for or employed on active service outside Australia or on a ship of war during the 1914-1918 and 1939-1945 Wars and persons who served in the warlike operations in Korea or Malaya or who have served on 'special service' as defined in the *Repatriation (Special Overseas Service) Act* 1962-1968. 'Special service' includes 'special duty' in an area which by reason of warlike operations or a state of disturbance has been declared a 'special area' under the *Repatriation (Special Overseas Service) Act*. The areas declared as a 'special area' under the Act are:

Vietnam (Southern Zone) from 31 July 1962;  
certain areas of Borneo, Sabah and Sarawak from 8 December 1962 to 30 September 1967;  
certain areas of Malaya from 28 May 1963;  
Malaysia (the remainder) and Singapore from 7 July 1965 to 30 September 1967;  
Vietnamese waters from 1 March 1967.

The categories of eligible persons also include the widow and, in some circumstances, the widowed mother of an eligible person and persons domiciled in Australia and employed in certain sea-going service during the 1914-1918 and 1939-1945 Wars.

The maximum amount of loan or advance which may be granted under the *War Service Homes Act* 1918-1968 is \$8,000. The period of repayment may be up to forty-five years. In the case of a widow or widowed mother of an Australian ex-serviceman, the period may be extended to a maximum of fifty years.

The Director of War Service Homes is responsible for the execution of the War Service Homes Act subject to the directions of the Minister for Housing.

#### Operations under the War Service Homes Act

The following tables give details of the operations under the War Service Homes Act in the year 1969-70 and from the inception of the scheme on 6 March 1919 to 30 June 1970. The earliest single year for which details are given in the tables is 1965-66; for earlier years *see* previous issues of the Year Book. The figures shown include operations in the Territories of Papua, New Guinea and Norfolk Island.

#### WAR SERVICE HOMES ACT: OPERATIONS, AUSTRALIA, 1969-70 AND TO 30 JUNE 1970

	1969-70			From inception to 30 June 1970		
	Eligibility established from service in—			Eligibility established from service in—		
	1914-18 War	1939-45 War, Korea, etc. (a)	Total	1914-18 War	1939-45 War, Korea, etc. (a)	Total
Applications received . No.	383	10,557	10,940	118,497	420,634	539,131
Applications approved . "	238	7,038	7,276	58,122	252,660	310,782
Homes purchased . "	174	4,469	4,643	20,126	132,301	152,427
Homes built, or assistance given to build them . "	14	782	796	24,132	69,845	93,977
Mortgages discharged . "	29	1,196	1,225	4,283	33,802	38,085
<i>Total homes provided</i> . "	217	6,447	6,664	48,541	235,948	284,489
Transfers and resales . "	25	445	470	9,604	15,028	24,632
Total capital expenditure \$'000	n.a.	n.a.	55,000	n.a.	n.a.	1,365,750
Total receipts . "	n.a.	n.a.	77,911	n.a.	n.a.	916,044

(a) Korea, Singapore, Malaysia or Vietnam (Southern Zone) and Vietnamese waters.

#### WAR SERVICE HOMES ACT: OPERATIONS, AUSTRALIA 1965-66 TO 1969-70

Year	Number of—					Total	Total capital expenditure	Total receipts
	Applications received	Homes provided						
		Homes purchased (a)	Homes built(b)	Mortgages discharged				
1965-66	10,841	7,252	1,143	1,452	9,847	\$'000	\$'000	
1966-67	10,160	6,007	1,070	1,304	8,381	70,010	62,166	
1967-68	9,664	4,483	807	1,162	6,452	59,123	67,050	
1968-69	10,715	4,668	767	1,105	6,540	46,019	69,165	
1969-70	10,940	4,643	796	1,225	6,664	50,191	72,622	
						55,000	77,911	

(a) Homes purchased with assistance under the War Service Homes Act.

(b) Or assistance given to build a home.

**WAR SERVICE HOMES ACT: ADVANCES FOR HOUSING AND NUMBER OF HOMES PROVIDED, STATES AND TERRITORIES, 1965-66 TO 1969-70**

<i>Period or date</i>	<i>N.S.W. (a)</i>	<i>Vic.</i>	<i>Qld (b)</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Total</i>
<b>TOTAL CAPITAL ADVANCED DURING YEAR (\$'000)</b>									
1965-66 .	27,053	19,716	9,667	6,172	5,310	1,562	28	503	70,011
1966-67 .	25,153	15,350	8,430	4,113	4,500	1,170	37	370	59,123
1967-68 .	19,635	11,346	6,800	2,997	3,520	1,195	3	524	46,020
1968-69 .	19,000	14,000	7,908	3,468	3,750	1,350	2	712	50,190
1969-70 .	21,300	14,550	8,900	4,048	4,100	1,300	52	750	55,000

**NUMBER OF SECURITIES IN FORCE**

<i>At end of June—</i>									
1966 .	61,050	53,839	23,397	16,457	18,579	4,005	52	975	178,354
1967 .	63,011	54,434	23,894	16,583	18,555	4,035	54	998	181,564
1968 .	63,840	54,453	24,279	16,581	18,530	4,066	50	1,051	182,850
1969 .	64,319	54,682	24,642	16,598	18,194	4,124	46	1,103	183,708
1970 .	64,623	54,804	25,021	16,593	18,017	4,168	49	1,164	184,439

**VALUE OF ADVANCES OUTSTANDING (\$'000)**

<i>At end of June—</i>									
1966 .	313,915	255,695	100,938	74,117	88,513	18,684	(c)	(d)	851,862
1967 .	327,969	260,617	105,308	75,402	89,064	19,025	(c)	(d)	877,385
1968 .	335,040	261,680	108,139	75,476	88,508	19,277	(c)	(d)	888,120
1969 .	340,331	264,336	111,744	75,916	87,421	19,791	(c)	(d)	899,539
1970 .	345,620	267,047	115,835	76,575	86,776	20,223	(c)	(d)	912,076

**NUMBER OF HOMES PROVIDED**

1965-66 .	3,812	2,799	1,350	856	727	229	4	70	9,847
1966-67 .	3,654	2,164	1,145	575	615	171	5	52	8,381
1967-68 .	2,761	1,564	974	419	487	171	1	75	6,452
1968-69 .	2,492	1,820	1,025	451	486	178	..	88	6,540
1969-70 .	2,526	1,817	1,092	508	454	168	6	93	6,664

(a) Includes Norfolk Island. (b) Includes Territories of Papua and New Guinea. (c) Included in South Australia.  
(d) Included in New South Wales.

In addition to the homes provided under the War Service Homes Act and shown above, 2,643 homes, which had been provided originally under the Housing Agreements with the States, have been taken over in accordance with those Agreements.

**Home Savings Grant Scheme**

The administration of the Home Savings Grant Scheme is a function of the Commonwealth Department of Housing. The purpose of the Scheme is to assist young married persons, and young widowed or divorced persons with dependent children, to purchase or build their own homes. A further objective is to increase the proportion of total private savings available for housing purposes by encouraging young people to save with those institutions which provide the bulk of long-term housing finance. The Scheme is governed by the *Homes Savings Grant Act 1964-1970*. The Act authorises the payment of grants from the National Welfare Fund.

The Scheme provides for the payment of grants of \$1 for every \$3 saved by eligible persons under 36 years of age for the first home they own after marriage. The savings must be made over a period of at least three years and held in an approved form. The maximum grant to a married couple, or to husband or wife if only one is eligible, or to a widowed or divorced person, is \$500 on savings of \$1,500 or more. Smaller grants down to a minimum of \$10 are payable on lesser amounts saved.



To be eligible for the grant, a person must be married, widowed or divorced, with one or more dependent children, and must have—or must be married to a person who has—entered into a contract to buy a home or have one built, or begun to build a home as an owner-builder. The person must be under 36 years of age at the time of marriage and, at the date of the contract to buy or build or the date building began, must have either been an Australian citizen or lived in Australia during the three years immediately preceding that date, and must also have saved in Australia in an approved form throughout that period. Those three years are known as the applicant's 'savings years'. The grant is payable in respect of existing homes and homes being built. Flats and home-units may also be eligible provided separate title can be obtained. The value of the home, including the land, the house itself and any other improvements, must not exceed \$17,500, or \$15,000 if the contract to buy or build the home was made, or the building of the home as an owner-builder began, before 27 October 1969. Most homes are eligible, the main exception being homes purchased from State housing authorities which have been built with money advanced by the Commonwealth under the Commonwealth-State Housing Agreement at concessional rates of interest.

The main forms of savings acceptable under the Scheme are accounts with savings banks and fixed deposits with trading banks (but not cheque accounts), and deposits with or shares in registered building or co-operative housing societies. Savings spent in connection with the purchase or construction of the home prior to the date of the contract to buy or build the home, or the date building began, are also acceptable. Savings held in savings or trading bank accounts by persons who entered into a contract to buy or build their homes before 27 October 1969 are acceptable only if the accounts had been designated as Home Savings Accounts. The amount of savings that qualify for a grant is the sum of the amounts by which the acceptable savings have increased, each year, up to a limit of \$600 in any one savings year, added to the acceptable savings held at the start of the three-year savings period.

Full details of the Scheme are set out in the official pamphlet *A Grant for Your Home* available from banks, building and housing societies, post offices, and offices of the Commonwealth Department of Housing throughout Australia. Additional statistical information is contained in the Annual Reports by the Secretary, Department of Housing, on the *Homes Savings Grant Act 1964–1970*, which are available from the Government Printer, Canberra.

#### Operations under the Home Savings Grant Scheme

Particulars of applications received and approved during 1969–70 and during the period from 20 July 1964, when the Scheme commenced to operate, to 30 June 1970 are set out below.

#### HOME SAVINGS GRANT SCHEME: OPERATIONS, STATES AND TERRITORIES, 1969-70

		N.S.W.	Vic.	Qld	S.A.(a)	W.A.	Tas.	A.C.T. (b)	Aust.
Applications received	No.	10,579	11,806	5,006	3,335	1,838	799	336	33,699
Applications approved(c)	"	9,244	9,617	4,595	2,926	1,449	716	281	28,828
Grants approved	\$'000	3,972	4,256	1,901	1,232	589	297	116	12,364
Average grant approved	\$	430	443	414	421	407	414	414	429
Expenditure from National Welfare Fund	\$'000	3,969	4,228	1,909	1,225	590	300	116	12,336

(a) Includes Northern Territory. (b) Includes Municipality of Queanbeyan, N.S.W. (c) Includes applications received on or before 30 June 1969 and approved after that date.

#### HOME SAVINGS GRANT SCHEME: OPERATIONS, 1965-66 TO 1969-70 AND TO 30 JUNE 1970

Year	Applications received	Applications approved	Grants approved	Average grant approved	Expenditure from National Welfare Fund
			\$'000	\$	\$'000
1965-66	29,021	29,647	13,348	450	13,346
1966-67	30,829	27,768	11,987	432	11,885
1967-68	34,412	32,518	13,446	414	13,299
1968-69	34,485	30,630	12,704	415	13,015
1969-70	33,699	28,828	12,364	429	12,336
Total from 20 July 1964	197,729	174,470	75,359	432	75,230

**Homes qualifying for grants**

The following two tables contain particulars of homes in respect of which grants were approved during 1969-70. As grants are payable only to persons under 36 years of age and in respect of homes costing no more than \$17,500 (or \$15,000 if acquired before 27 October 1969), these statistics should not be regarded as being applicable to home owners in general.

**HOME SAVINGS GRANT APPLICATIONS APPROVED: MANNER OF ACQUISITION,  
TOTAL VALUE, AND AVERAGE VALUE OF HOMES (INCLUDING LAND)  
STATES AND TERRITORIES, 1969-70**

<i>State or Territory</i>	<i>Purchase of house(a)</i>			<i>Purchase of flat or home unit</i>			<i>Home built under contract</i>		
	<i>Number of approvals</i>	<i>Total value(b)</i>	<i>Average value(b)</i>	<i>Number of approvals</i>	<i>Total value(b)</i>	<i>Average value(b)</i>	<i>Number of approvals</i>	<i>Total value(c)</i>	<i>Average value(c)</i>
		\$'000	\$		\$'000	\$		\$'000	\$
New South Wales . . .	5,707	65,477	11,473	358	4,406	12,308	2,909	36,696	12,615
Victoria . . .	5,863	67,542	11,520	47	531	11,308	3,353	42,735	12,745
Queensland . . .	2,481	23,685	9,547	12	134	11,147	1,893	21,341	11,274
South Australia(d) . . .	1,741	18,723	10,754	10	89	8,934	1,127	13,890	12,325
Western Australia . . .	807	9,699	12,018	51	672	13,169	547	7,270	13,290
Tasmania . . .	429	4,422	10,308	3	37	12,460	208	2,436	11,711
Australian Capital Territory(e)	148	2,186	14,773	..	..	..	113	1,611	14,253
<b>Australia . . .</b>	<b>17,176</b>	<b>191,735</b>	<b>11,163</b>	<b>481</b>	<b>5,870</b>	<b>12,204</b>	<b>10,150</b>	<b>125,979</b>	<b>12,412</b>

<i>State or Territory</i>	<i>Owner-built home</i>			<i>All homes</i>		
	<i>Number of approvals</i>	<i>Total value(f)</i>	<i>Average value(f)</i>	<i>Number of approvals</i>	<i>Total value</i>	<i>Average value</i>
		\$'000	\$		\$'000	\$
New South Wales . . .	270	2,999	11,109	9,244	109,579	11,854
Victoria . . .	354	4,338	12,253	9,617	115,146	11,973
Queensland . . .	209	2,038	9,753	4,595	47,199	10,272
South Australia(d) . . .	48	607	12,656	2,926	33,310	11,384
Western Australia . . .	44	529	12,023	1,449	18,169	12,539
Tasmania . . .	76	925	12,171	716	7,820	10,922
Australian Capital Territory(e)	20	268	13,394	281	4,065	14,466
<b>Australia . . .</b>	<b>1,021</b>	<b>11,705</b>	<b>11,464</b>	<b>28,828</b>	<b>335,288</b>	<b>11,631</b>

(a) Includes previously occupied houses. (b) Usually based on the purchase price. (c) Usually based on the cost of the land and the contract price of the dwelling. (d) Includes Northern Territory. (e) Includes Municipality of Queanbeyan, N.S.W. (f) Usually based on the cost of the land and the assessed value of the dwelling.

**HOME SAVINGS GRANT APPLICATIONS APPROVED: METHOD OF FINANCING HOMES  
AND AVERAGE MORTGAGE LOANS, STATES AND TERRITORIES, 1969-70**

<i>State or Territory</i>	<i>Method of financing homes</i>					
	<i>With first mortgage loan and without second mortgage loan</i>		<i>With first and second mortgage loans</i>	<i>Others(a)</i>	<i>Total</i>	<i>Average first mortgage loan(b)</i>
	<i>number</i>	<i>number</i>	<i>number</i>	<i>number</i>	<i>number</i>	<i>\$</i>
New South Wales . . .	7,794	1,171	279	9,244	8,083	2,044
Victoria . . .	7,841	1,203	573	9,617	8,173	1,813
Queensland . . .	4,159	267	169	4,595	7,472	1,685
South Australia(c) . . .	2,012	791	123	2,926	7,843	1,866
Western Australia . . .	1,038	267	144	1,449	9,106	1,995
Tasmania . . .	594	75	47	716	8,034	1,638
Australian Capital Territory(d)	67	212	2	281	8,048	3,586
<b>Australia . . .</b>	<b>23,505</b>	<b>3,986</b>	<b>1,337</b>	<b>28,828</b>	<b>8,037</b>	<b>1,986</b>

(a) Homes financed without mortgage loan. Includes homes financed from the applicants' own resources only, with personal or unsecured loans, purchased under a terms contract of sale, etc. (b) Includes homes financed with and without second mortgage loans. (c) Includes Northern Territory. (d) Includes Municipality of Queanbeyan, N.S.W.

### Housing loans insurance scheme

The Housing Loans Insurance Corporation was established by the *Housing Loans Insurance Act* 1965 to insure approved lenders against losses arising from the making of housing loans. The main purpose of the activities of the Corporation is to assist people to borrow, as a single loan at a reasonable rate of interest, the money they need and can afford to repay to obtain a home suited to their requirements.

The Corporation will insure loans of up to \$30,000. The maximum loan to valuation ratio is 95 per cent for loans up to \$15,000 for the purchase or construction of houses. For other loans for home purchase or construction the maximum is 90 per cent. A once-and-for-all premium of 1½ per cent of the amount of the loan is charged by the Corporation for the insurance of loans representing 80 per cent or more of valuation. The premium rate falls to a minimum of 0.5 per cent on loans of less than 71 per cent of valuation. The premium normally is payable by the borrower, but lenders may agree to add it to the amount of the loan for repayment by the borrower over the duration of the loan. The maximum rate of interest that may be charged on insured loans is 8½ per cent (February 1971) per annum and the maximum period for repayment is forty years. The maximum rate of interest is kept under continuing review and may be varied by the Corporation, with the concurrence of the Minister for Housing, whenever changes appear to be warranted by movements in interest rates generally or by other developments.

The Corporation insures loans that are made for a wide range of purposes in addition to the purchase or construction of a dwelling. The other purposes include alterations, extensions or improvements to a dwelling, and the provision or improvement of roads, kerbing and footpaths. An insured loan may be made only by an approved lender. Approved lenders are appointed by the Corporation from within approved classes of lenders specified by the Minister for Housing. The approved classes include banks, housing and building societies, friendly societies, life and general insurance companies, trustee companies, superannuation and other retirement funds, mortgage management companies and solicitors. The Corporation commenced its operations in November 1965. By the end of December 1970 the value of loans insured had amounted to \$505 million.

### State housing authorities

The following paragraphs describe briefly the organisation of the various State housing authorities and their activities in the fields of home construction and provision of homes on a rental basis (*see* pages 215–17 for their financial advances to persons wishing to purchase or build a home). For summarised figures of total government construction of houses and flats, *see* pages 194–5, and 198–9. For a fuller description of the activities of State housing authorities and their financial advances to home purchasers or builders *see* Year Book No. 53, pages 283–91.

*New South Wales*—The *Housing Commission of New South Wales*. The Housing Commission of New South Wales was constituted in 1942, its principal function being the provision of low-cost housing for rental or sale to persons in the lower or moderate income groups.

Advances from the Commonwealth have provided most of the Housing Commission's capital funds and by 30 June 1970 had aggregated \$533,007,000 of which \$59,271,000 had been repaid. Other net funds of the Commission at 30 June 1970 comprised repayable advances from the State, \$17,506,000, public loans raised by the Commission, \$1,300,000, grants from the Commonwealth, \$465,000, grants from the State, \$17,947,000 (including \$8,875,000 from consolidated revenue and \$9,000,000 from taxes on poker machines), provision for maintenance of properties, \$5,411,000, and accumulated surplus, \$38,372,000. In addition, the Commission owed \$6,802,000 to creditors, mainly for purchase of land and work-in-progress. These funds were represented by fixed assets, \$552,183,000 (including \$177,984,000 debtors for purchase of homes) and current assets, \$9,356,000. In 1969–70, the Commission's income was \$38,525,000 (including rent \$27,048,000 and interest \$8,835,000), expenditure \$36,064,000 (interest, \$17,608,000), and capital expenditure (including construction of houses for sale on rental purchase terms) \$46,975,000.

Most of the permanent dwellings provided by the Commission have been erected under the Commonwealth-State Housing Agreements. In 1969–70, 4,605 houses and flats, valued at \$30,509,000, were completed for the Housing Commission by private builders on contract to the Commission.

Upon request by other State Departments the Housing Commission will erect houses for employees of those Departments, the Departments providing the necessary lands and funds. In addition, the Commission erects (with State funds) dwellings for employees of industries connected with decentralisation and development. Specially designed units are erected by the Housing Commission to provide dwellings for elderly persons at rentals within their means. The rents of these units, since October 1969, are approximately \$2.50 a week for elderly single persons and \$3.75 a week for elderly couples, and 4,920 units had been completed at 30 June 1970.



Applicants for Commission housing may elect either to purchase or to rent the dwelling allocated to them. Terms of sale provide for a minimum deposit of \$100 with repayments spread over a maximum period of forty-five years. Further, those tenants who originally elect to rent may subsequently purchase the dwellings occupied by them on similar terms. Applicants may also apply to have a standard type of dwelling erected on their own block of land.

*Victoria—Housing Commission, Victoria.* The Housing Commission, Victoria, was set up in 1938 as a result of the Housing Act of the previous year. The objects of the Commission as now laid down are the improvement of existing housing conditions; the provision of suitable rental housing for persons displaced by slum reclamation or living under unsatisfactory conditions, and for other eligible persons; the sale of houses to eligible persons and the making of advances to such persons to enable them to own their homes; the development of land for housing and related purposes; and the responsibility of maintaining housing standards. Since the signing of the 1945 Commonwealth-State Housing Agreement the construction of dwellings has been financed by the Commonwealth Government and Commission Funds.

At 30 June 1970 the Housing Commission had completed 1,328 dwelling units under the State Housing Scheme, and 65,473 dwelling units under Commonwealth-State Agreements. Specially designed dwelling units are erected by the Commission to provide dwellings for elderly persons at rentals within their means. To 30 June 1970, 4,088 units had been completed.

*Queensland—The Queensland Housing Commission.* The Queensland Housing Commission was established in 1945 to assist in meeting the housing shortage. In addition, the Commission was empowered to build houses itself, either for sale or for rental.

The Housing Commission finances its operations through two Treasury Trust Funds—the Queensland Housing Commission Fund and the Commonwealth-State Housing Fund. In addition, a Home Builders' Deposit Trust Fund is available to assist eligible persons to accumulate money to acquire land and erect a Commission dwelling thereon, or to purchase a dwelling under contract of sale conditions. Total disbursements by the Commission for the year 1969–70 amounted to \$33,375,387, representing \$8,169,954 from the Queensland Housing Commission Fund and \$25,205,433 from the Commonwealth-State Housing Fund, while the Home Builders' Deposit Fund had a balance of nil at 30 June 1970.

During 1969–70 the Commission completed 1,073 house units, bringing the total completions under all schemes since the revival of housing construction in 1944–45 to 39,986. Of this number, 23,514 houses, or 58.8 per cent, were for home ownership, and 16,472, or 41.2 per cent, were for rental.

In the field of rental housing the Commission administers and acts as the constructing authority under the Commonwealth-State Housing Agreements. Operating under the provisions of 'The State Housing Acts, 1945 to 1966' the Commission, through its scheme of workers' dwellings, makes advances for the construction of dwellings to eligible persons who own a suitable building site. The number of workers' dwellings completed during 1969–70 amounted to 160, making a total of 30,786 completions since the inception of the scheme. The Commission also has power to make advances, secured by mortgage, to firms for housing of employees. The Commission has power to sell houses under contract of sale conditions. Contract of sale agreements were made to purchase 764 of the Commission's houses during 1969–70.

*South Australia—The South Australian Housing Trust.* The South Australian Housing Trust operates under the South Australian Housing Trust Act, 1936–1965 and the Housing Improvements Act, 1940–1966 for the purpose of providing houses for families of limited means. Houses are built for both rental and sale, and to 30 June 1970, 68,093 had been completed throughout the State, of which some 33,557 had been built and sold under various schemes. At 30 June 1970 the rents of five-roomed (i.e. three bedrooms) double-unit houses ranged from \$7.75 a week for houses of an older type to \$11.00 a week for houses then being completed. Single units rent ranged between \$11.00 and \$14.50. Two- and three-storey groups of flats with weekly rentals ranging from \$9.00 to \$17.00 per flat have been built in the Metropolitan Area and at Elizabeth; 1,291 of these flats have been completed in the Metropolitan Area and 220 at Elizabeth. In 1953 the Trust began building cottage or pensioner flats for elderly people. At 30 June 1970 it had built 1,003 cottage flats from its own resources and an additional 772 for charitable and non-profit organisations. As an agent for the South Australian Government, the Trust also constructs houses in country areas for married couples of limited means. Rents charged in these cases are below economic rents.

During 1962–63 the Trust commenced construction of rental-purchase houses. The aim of this scheme is to provide less expensive houses for the lower income groups. It is expected that such houses will, to some extent, replace double-unit type rental houses. The Trust has also undertaken the construction of houses for various State Government Departments which need to house staff in

country districts. In addition, 220 houses in country areas have been built for the State Department of Aboriginal Affairs. The letting of these houses to selected Aboriginal families is administered by the Department. In order to assist primary producers the Trust will erect houses on the applicant's own land for his own use or that of his employees, either using local materials or transporting prefabricated houses to the site.

*Western Australia—State Housing Commission of Western Australia.* The activities of the State Housing Commission extend throughout the whole State and, in addition to construction of houses and flats under the State Housing Act and Commonwealth-State Housing Agreements, include:

- The management as agent of the Commonwealth War Service Homes Scheme in Western Australia;

- Construction of houses for other Government Departments (both Commonwealth and State) in Western Australia;

- Construction and maintenance of houses for the Government Employees Housing Authority.

At 30 June 1970, the Commission had completed under all schemes since 30 June 1944, a total of 50,377 units of houses and flats throughout the State.

During the twelve months ended 30 June 1970, 2,360 houses and flats were completed: metropolitan area, 1,700; country, 453; and north of 26th parallel, 207; and a further 2,143 units were under construction.

To conserve land resources and to make the most economical use of available facilities such as sewerage, water, and power, the Commission has programmed construction in the metropolitan region to include flats and terrace houses, in addition to individual homes.

At 30 June 1970, medium density accommodation valued at \$13,100,000 (representing 1,523 units) was either under construction or out to tender throughout the metropolitan region.

The greatly increased rate of construction in recent years has created a high demand for serviced building sites, particularly in the metropolitan area, with a consequential rise in land prices.

Despite the high rate of home construction and the ready availability of private project-built homes for purchase, the demand—particularly from the lower income groups—continues to be high. A large proportion of this demand is directed to the State Housing Commission.

Under the provisions of the Commonwealth-State Housing Agreement, 30 per cent of the loan funds is made available each year to building societies. At 30 June 1970, it was estimated that at least 22,400 homes were being purchased with the assistance of building society finance, and the assets of all societies approximated \$223 million. Currently, fifteen permanent societies and 303 terminating societies are operating.

Complementing the activities of the building societies, is the Housing Loan Guarantee Act, which provides means for financial institutions to make large-scale loans to lending institutions with full security by way of a 100 per cent guarantee. The Act was introduced in 1957 and with subsequent amendments, now enables lending institutions to make high ratio advances to families of low and moderate means without any additional charge. The interest rate charged may not exceed  $7\frac{1}{2}$  per cent per annum reducible. The maximum loan permitted is \$10,000 in metropolitan and country areas, and \$13,000 in areas north of the 26th parallel; and the value of the house, excluding land, must not exceed \$10,000 in the metropolitan area; \$11,000 in country areas; and \$17,500 in areas north of the 26th parallel.

*Tasmania—The Housing Department.* The Housing Department was established in July 1953 and is responsible for administering that portion of the *Homes Act* 1935 which relates to the acquisition and development of land for housing purposes and the erection of homes for rental and ultimate sale, and the *Casual Workers' and Unemployed Persons' Homes Act* 1936.

During 1969–70, 536 dwellings were completed. Construction since 1944 has comprised 12,000 dwelling units, of which 11,392 were single units (9,286 of timber), 290 were elderly persons' flatettes, 22 were maisonettes, and 296 were multi-unit flats.

Flats, maisonettes and elderly person's homes are for rental only. Single unit dwellings are normally allotted on a purchase contract basis, but in some special cases may be occupied on a rental basis. The rental of a newly erected three-bedroom timber house in the Hobart metropolitan area approximated \$17.85 in the June quarter of 1970. In certain necessitous cases rental rebates are allowed. Under the current rental rebate formula a married couple whose only income is the age pension pay \$3.80, while a single person solely dependent on the pension pays \$2 a week.

Allotments are usually made on a no-deposit purchase contract basis, repayments being over a maximum term of fifty-three years. Purchase contracts are sometimes surrendered to the Department. Net of surrenders, 8,209 purchase contracts had been entered into by June 1970. The sale price, excluding land, of a new three-bedroom house in the Hobart metropolitan area was approximately \$8,600 in the June quarter of 1970.

**Housing schemes in Commonwealth Territories**

*Northern Territory.* In 1946 control of all government-owned residences in the Territory (excluding those belonging to the Defence Services or Commonwealth Railways, or attached to post offices) was vested in the Administration. The Northern Territory Housing Commission provides rental housing for persons of limited means who are not adequately housed and who are not officers of either the Commonwealth or the Northern Territory Public Service. The Commission was established in 1959 and operates under authority of the *Housing Ordinance* 1959-1970; to 30 June 1970 a total of 2,254 houses and flats had been completed; 1,641 of these are in Darwin (including 426 flats), 388 in Alice Springs (including 51 flats), 118 in Katherine (including 10 flats), and 97 in Tennant Creek (including 9 flats); 6 houses in Pine Creek and 2 each at Elliot and Mataranka. A further 264 houses were under construction.

*Australian Capital Territory.* The Commonwealth Government provides houses and flats for rental to persons employed in the Australian Capital Territory. At 30 June 1970 the Department of the Interior controlled 8,511 houses and 2,022 flats for rental purposes. Government rental houses may be purchased by tenants. From 1 July 1950 to 30 June 1970, 7,596 houses had been sold to tenants.

*Papua and New Guinea.* In 1960 the Administration, through the Commissioner for Housing, commenced a housing loans scheme for providing low-cost houses for rental and eventual sale, where possible, to indigenes, mixed race peoples and Asians. This scheme was taken over by the Housing Commission at its inception on 1 July 1968, along with the 323 houses built under the scheme.

A Housing Commission was established to improve existing housing conditions, to provide adequate and suitable housing for letting and sale to persons who are of limited means to make advances for home purchase, and to develop land for housing. Details of housing constructed are as follows: 323 houses taken over from the Administration on 1 July 1968; 279 houses constructed during the year ended 30 June 1969; 54 houses and 64 flats constructed during the year ended 30 June 1970; 50 houses taken over from the Administration on 1 July 1970; and 527 houses and 64 flats constructed during the year ended 30 June 1971.

**Summary of rental activities of government authorities**

The first of the following two tables shows the revenue from rental for dwellings under control of government housing authorities each year from 1965-66 to 1969-70, and the second the number of tenants paying rent for dwellings under control of government housing authorities at the end of each year 1965-66 to 1969-70.

**GOVERNMENT HOUSING AUTHORITIES: REVENUE FROM RENTALS, STATES AND TERRITORIES, 1965-66 TO 1969-70**  
(\$'000)

Year	N.S.W.	Vic.	Qld(a)	S.A.(b)	W.A.	Tas.	N.T.	A.C.T.	Aust.
1965-66	18,864	13,918	5,459	9,440	5,532	1,344	820	3,708	59,085
1966-67	20,823	15,406	6,181	10,915	6,678	1,522	985	3,853	66,363
1967-68	22,779	16,266	6,702	11,603	7,161	1,761	1,103	3,861	71,236
1968-69	24,661	17,207	7,486	12,506	8,003	1,902	1,261	4,137	77,163
1969-70	27,048	18,062	8,403	13,493	8,120	2,008	1,703	4,459	83,296

(a) Excludes rentals in respect of tenanted temporary dwellings. (b) Excludes rentals in respect of temporary and emergency dwellings.

**GOVERNMENT HOUSING AUTHORITIES: NUMBER OF TENANTS PAYING RENT STATES AND TERRITORIES, 1965-66 TO 1969-70**

Year	N.S.W.	Vic.	Qld(a)	S.A.(b)	W.A.	Tas.	N.T.	A.C.T.(c)	Aust.
1965-66	50,346	33,995	13,439	27,632	16,639	3,283	2,398	9,073	156,805
1966-67	54,172	35,307	14,046	28,305	17,393	3,451	2,869	9,143	164,686
1967-68	57,643	35,774	14,781	30,012	17,771	3,590	2,824	9,440	171,835
1968-69	60,293	36,403	15,693	31,322	18,340	3,644	2,939	9,904	178,538
1969-70	62,293	37,591	16,086	31,993	19,226	3,741	3,400	10,311	184,641

(a) Excludes tenanted temporary dwellings. (b) Excludes temporary and emergency dwellings. (c) Number of occupied dwellings at 30 June.



### Advances to home purchasers

Many prospective home purchasers wish to borrow for the purpose of constructing or purchasing their own homes. Usually the loan is covered by way of mortgage of the home to be constructed or bought. Such loans are provided from a number of private sources and from agencies owned or guaranteed by the State or Commonwealth Governments. The information in this section concerns the direct loans made to home purchasers by the more important institutional lenders. Loans to institutions which in turn lend moneys to home purchasers and loans to contract builders, etc. are excluded as far as possible. The loans may be for the construction of new dwellings, the purchase of existing dwellings, for additions, renovations, etc., as first or subsequent mortgages, overdrafts and so on. While figures of all loans to home purchasers are not available, the institutions mentioned account for a significant proportion of total loans. Details of the terms and conditions of lending are given, together with available information on the number and value of loans made.

#### State authorities and agencies

##### *New South Wales*

**Rural Bank of New South Wales—Sale of Homes Agency.** A Sale of Homes Agency was established in 1954 to arrange for the sale on terms of houses erected by the Housing Commission of New South Wales. The Agency's operations began with the sale to selected purchasers of 100 houses made available by the Commission during 1954-55 and 1955-56. The sales were made on the basis of 10 per cent deposit and repayment of the balance over a maximum period of forty years, with interest at 4.5 per cent per annum. Total advances under that scheme amounted to \$646,648; at 30 June 1970 the advances outstanding amounted to \$324,307 in respect of 72 houses.

Since 1956 the Sale of Homes Agency has acted as the agent of the Housing Commission in arranging the sale on terms of houses erected under the Commonwealth-State Housing Agreements. The terms of sale provide for a minimum deposit of \$100 and repayment of the balance over a maximum period of forty-five years, with interest rates, since the inception of the scheme, ranging from 4.25 to 5.15 per cent per annum. Particulars of the advances made by the Agency in connection with the sale of houses erected under the 1956, 1961, and 1966 Agreements are given in the following table.

**RURAL BANK OF NEW SOUTH WALES—SALE OF HOMES AGENCY  
ADVANCES FOR HOMES SOLD UNDER THE 1956, 1961 AND 1966  
COMMONWEALTH-STATE HOUSING AGREEMENTS  
1965-66 TO 1969-70**

Year	Advances during year		Advances outstanding at end of year(a)	
	Number of houses	Amount	Number of houses	Amount
		\$'000		\$'000
1965-66 . . .	1,486	12,197	17,126	114,154
1966-67 . . .	1,073	9,005	17,763	119,077
1967-68 . . .	1,444	12,866	18,724	127,288
1968-69 . . .	1,227	11,167	19,406	133,363
1969-70 . . .	1,751	17,074	20,523	144,511

(a) Comprises principal outstanding and loan charges due but not paid.

The Sale of Homes Agency also acts as agent for the Housing Commission in arranging the sale of houses erected by the Commission on applicants' land. Under this scheme persons who have established a housing need may apply to the Commission to have a standard-type dwelling erected on their own land. The houses are sold, at a price equivalent to their capital cost, on the same terms as for houses erected under the 1956-1966 Housing Agreements. Up to 30 June 1970, 570 houses had been built under this scheme at a cost of \$4,113,539, the balance of indebtedness at that date was \$3,598,177.

**Rural Bank of New South Wales—Other loans.** The Rural Bank of New South Wales provides assistance to individuals for the erection or purchase of homes and for other approved purposes associated with homes. Advances are based on the bank's official valuation of the dwelling. The rate of interest on long-term loans for housing purposes is 5.75 per cent per annum.

##### *Victoria*

**Housing Commission, Victoria.** Very few houses were sold by the Commission until 1954 but the added emphasis given to the construction of houses for private ownership by the amendments in the Commonwealth-State Housing Agreement in 1955-56 had the effect of substantially increasing the number of houses sold.

Of the 66,801 dwelling units built up to 30 June 1970, under the State Housing Scheme and the Commonwealth-State Agreements, a total of 29,539 houses have been sold (16,501 in the metropolitan area and 13,488 in the country).

*Home Finance Trust.* In 1956 a Home Finance Trust was established with the object of receiving money from institutions and others in order to make loans for the erection or purchase of houses. Applicants for loans must declare that they intend to use the houses as homes for themselves, their families and dependants.

Loans granted are on the basis of a first mortgage over the house. Loans are not to exceed ninety-five per cent of the value of the security (house and land) and are not made if the value of the security exceeds \$14,000. The house must not have been erected more than two years before the date of mortgage. Repayment of loans may be made over a maximum period of thirty years, with interest charges determined by the Trust. At 30 June 1970, 3,760 loans totalling \$25,896,611 were outstanding.

In 1963 the Trust was empowered to make housing loans on the security of second mortgages subject to conditions similar to those applying to the first mortgage loans, except that the maximum term for repayment of a loan is ten years and no restriction is placed on the percentage of loan to valuation. At 30 June 1970, 2,056 second mortgage loans were outstanding, the amount involved being \$2,624,680.

(See Savings Banks, page 218, for activities of the State Savings Bank of Victoria.)

### *Queensland*

*Queensland Housing Commission.* The present maximum advance allowable under the Acts is \$9,000 for a timber, brick veneer, brick, or concrete building. The rate of interest charged on new advances was increased from 5½ per cent to 6½ per cent per annum from 3 November 1969, and was further increased to 7½ per cent per annum from 30 July 1970. Repayment may be made at the option of the borrower over either a thirty year or a forty-five year period.

*Workers' dwellings.* From 4 October 1962 the maximum advance under this scheme was increased to \$7,000 for all types of workers' dwellings. This was increased to \$8,000 from 2 June 1966 and to \$9,000 from 22 May 1969. Total advances made for dwellings since operations commenced in 1910 to 30 June 1970 amounted to \$70,795,050.

### *South Australia*

*South Australian Housing Trust Sales Schemes.* Prospective purchasers of Housing Trust houses (other than Rental Purchase houses) may purchase either by paying cash or by paying a deposit and arranging for a loan on security of a first mortgage from any of the recognised lending authorities. In cases where the deposit and the first mortgage so raised are insufficient, the Trust may advance the balance of the house price on security of a second mortgage, the term of which is usually coterminous but not exceeding 30 years. The interest rate is 7½ per cent and the principal is adjusted quarterly. During 1969-70 the Trust commenced 465 second mortgages valued at \$912,000. At 30 June 1970 second mortgages totalled 9,008 and the balance outstanding at that date was \$9,100,000. A minimum deposit of \$100 is required for houses built under the Rental Purchase Scheme. The balance of the purchase price is repayable to the Trust in weekly instalments over periods up to 40 years at 6½ per cent interest.

*State Bank of South Australia.* The State Bank, together with the Housing Trust, are the principal agents of the State Government for the distribution through the Home Builders' Fund of moneys received under the Commonwealth-State Housing Agreement. During 1969-70 the Bank opened 1,698 new accounts worth \$13,370,388 in the Home Builders' Fund. The balance of loans in this Fund outstanding at 30 June 1970 totalled \$92,845,701. In addition, during 1969-70, \$592,393 was advanced to the public under the Advances for Homes Act, 1928-1968, which is administered by the Bank on behalf of the State Government. Under this Act 81 new accounts were opened during 1969-70, leaving a balance outstanding at 30 June 1970 of \$22,291,398. The present maximum housing loan under either of these schemes is \$9,000, repayable over a period not exceeding fifty years at a rate of interest of 6½ to 7½ per cent per annum calculated on monthly balances.

(See Savings Banks, page 219 for activities of the Savings Bank of South Australia.)

### *Western Australia*

*State Housing Commission of Western Australia.* Under the State Housing Act and the Commonwealth-State Housing Agreement the maximum loan is \$8,000 by way of mortgage, while under contract of sale the maximum is \$6,500 on the building plus the value of the land in the metropolitan area, and greater amounts in rural areas, depending on the circumstances.

To proceed under the mortgage conditions, a deposit of not less than 10 per cent is required, but under contract of sale the deposit may be as low as \$200. The interest rate on all advances is 5½ per

cent per annum and the repayment period is forty-five years. The income eligibility figure varies according to the movement of the basic wage, and currently an applicant in the Metropolitan Area cannot have an income exceeding \$2,799 a year, plus \$100 for each dependent child under twenty-one years of age. For the country the corresponding amount is \$3,311 per annum plus \$100 for each dependent child under twenty-one years, and north of the twenty-sixth parallel the Minister may allow families with an income of up to \$4,378 plus \$100 for each dependent child under twenty-one years of age to be given financial assistance. A second-mortgage scheme exists under the State Housing Act, which provides that assistance be limited to those applicants who are building or purchasing new homes, the cost of which, excluding land, does not exceed \$10,000. The Commission limits the second mortgage to a maximum of \$2,000.

Under the State Housing Act an interest rate subsidy of up to 1 per cent during the first 10 years of a loan provided by an 'approved lending institution', will be paid by the Commission. The purchaser is not to pay more than 7 per cent per annum reducible on a loan not exceeding \$12,500 on a new house, and his income is not to be more than \$4,000 per annum.

(See Savings Banks, page 219, for activities of the Savings Bank Division of The Rural and Industries Bank of Western Australia).

### *Tasmania*

*Housing Department.* The interest rate on purchase contract loans as at 1 July 1970, was 6 per cent. To be eligible for a house on purchase contract terms an applicant must be married or about to be married, or have dependants for whom it is necessary to provide a home. The number of loans outstanding at 30 June 1970 was 7,436, and the amount outstanding \$52,198,857.

*Agricultural Bank of Tasmania.* The Agricultural Bank, as an approved institution under the Commonwealth-State Housing Agreement, receives part of those funds allocated for advances to home builders. To be eligible for a loan an applicant must be married or about to be married, be over the age of twenty-one, and own a block of land. The maximum amount of an advance to an applicant is \$9,000 for all types of houses in certain areas, provided that the total advance does not exceed ninety per cent of the Bank's valuation of land and dwelling. Advances to borrowers are repayable by equated instalments over thirty-one years. Advances made as from 1 July 1970 were at an interest rate of 7 per cent.

During 1969-70, 274 advances were approved, valued at \$2,250,000. Since November 1945 a total of 4,287 loans amounting to \$27,248,000 has been approved, of which 3,379 have been for erection of dwellings and 908 for the purchase of existing homes. Total advances outstanding at 30 June 1970 amounted to \$19,184,000. These figures exclude advances to building societies.

### **Commonwealth authorities and Territories**

#### *Department of Housing*

In December 1963 the Department of Housing was created, and to it were transferred the functions and staff of the War Service Homes Division and the Housing and Building Industry Branch of the Department of National Development. Further details relating to the Department of Housing may be found on page 83 of Year Book No. 50.

#### *War Service Homes*

For details of the operations under the War Service Homes Act, see pages 206-8.

#### *Northern Territory*

*Loans Scheme.* This scheme was commenced in 1953 and is administered by the Home Finance Trustee under the *Housing Loans Ordinance* 1949-1970. Advances may be made for the erection of a house, the purchase or enlargement of an existing house, the completion of a partially erected dwelling, or the discharge of a mortgage already existing. Loans are provided on a deposit of 5 per cent of the first \$4,000 and 10 per cent of the balance of the Trustee's valuation up to a maximum of \$8,000. The rate of interest charged is  $7\frac{1}{4}$  per cent per annum reducible to  $6\frac{1}{4}$  per cent per annum if instalment payments are made by the due date. The maximum period of repayment is forty-five years for brick houses and twenty-five years for other houses. Up to 30 June 1970, 1,232 loans totalling \$7,240,150 had been approved. These were for: erection, 772; purchase, 383; enlargement or completion, 71; discharge of mortgage, 56.

*Sales Scheme.* Tenants of government-owned houses under the control of the Administration may purchase the dwellings they occupy either for cash or on terms requiring a minimum deposit of 5 per cent of the first \$4,000 and 10 per cent of the balance of the purchase price with repayments over a maximum period of forty-five years including interest at  $4\frac{1}{2}$  per cent per annum.



*Housing Commission Sales Scheme.* Since the November 1963 amendment of the *Housing Ordinance* 1959–1968 the Housing Commission has been permitted to sell its houses to tenants in occupation. The terms require a minimum cash deposit of \$200 and repayment of the remainder of the loan over a period not exceeding forty-five years; there is no prescribed limit to the amount of the loan and the rate of interest is fixed by the Commission from time to time.

#### *Australian Capital Territory*

Loans may be granted by the Commissioner for Housing to enable persons to purchase or build a new house in the Australian Capital Territory. Where the Commissioner's valuation does not exceed \$4,000 the maximum loan may not exceed ninety-five per cent of the valuation. If the Commissioner's valuation exceeds \$4,000, the maximum loan is ninety-five per cent of the first \$4,000 and ninety per cent of the balance (but in no case can the amount lent exceed \$8,000). Repayment may be made over a maximum period of forty-five years. The current rate of interest is  $7\frac{1}{4}$  per cent per annum with a concession of 1 per cent for payments made on or before the due date. At 30 June 1970, 7,052 houses were under mortgage to the Commissioner.

Government rental houses may be purchased by tenants. The basis of the sale is a minimum deposit of 5 per cent of the purchase price fixed by the Department of the Interior with no limit to the amount which may be held on mortgage from the Department. Repayment of the amount covered by mortgage may be made over a maximum period of forty-five years. The interest rate is  $7\frac{1}{4}$  per cent per annum with a concession of 1 per cent for payment made on or before the due date. To 30 June 1970, 7,596 houses had been sold to tenants.

#### *Papua and New Guinea*

Under authority of the *Housing Loans Ordinance* 1953–1963 the Commissioner for Housing may make advances to any member of the community for the erection of a house, the purchase or enlargement of an existing house, the completion of a partially erected dwelling, or the discharge of a mortgage already existing. The maximum loan is \$7,000. The maximum period of repayment is twenty-five years for all dwellings. The Commissioners' responsibilities were transferred to the Housing Commission on 1 July 1968. Minimum cash deposit is 5 per cent of the first \$4,000 plus 10 per cent of the remainder of the Commissioner's valuation. The effective rate of interest is currently  $7\frac{1}{4}$  per cent per annum or 1 per cent above the borrowing rate of the funds. Up to 30 June 1970, 514 loans totalling \$2,737,335 had been approved.

#### **Savings banks**

All savings banks lend funds for housing to both individuals and building societies. Details of savings banks housing finance transactions during 1969–70 are shown in the following table. (See the chapter Private Finance for further details.)

#### **SAVINGS BANKS: HOUSING LOANS APPROVED AND BALANCES OUTSTANDING TO INDIVIDUALS, STATES AND TERRITORIES, 1969–70**

Year	N.S.W.	Vic.	Qld.	S.A.(a)	W.A.	Tas.	A.C.T.	Total
LOANS APPROVED DURING YEAR (\$'000)								
1969–70	140,535	190,079	52,612	46,164	27,200	9,187	3,404	469,181
BALANCES OUTSTANDING AT END OF YEAR (\$'000)								
1969–70	524,010	748,483	196,498	254,401	120,144	45,487	9,258	1,898,281

(a) Includes Northern Territory.

*State Savings Bank of Victoria.* The Bank grants long-term loans to depositors to enable them to build, purchase or improve homes. These loans are granted by both the Crédit Foncier and Savings Bank Departments.

The maximum proportion of valuation to be granted as Crédit Foncier loan is eighty per cent and the maximum loan is \$8,000. Interest is  $6\frac{1}{2}$  per cent and the term of the loan is ten years, subject to renewal. The maximum proportion of valuation granted as Savings Bank Department loan is seventy-five per cent and the maximum loan is \$12,000. For a property to be occupied by the borrower the interest rate is  $6\frac{1}{2}$  per cent to  $7\frac{1}{4}$  per cent, depending on the amount of the loan. The above conditions are those current as at 27 January 1971 but are subject to review and alteration by the Bank at any time. During the year 1969–70 the Bank advanced \$74,082,639 to 9,114 borrowers

in addition to \$31,494 to Co-operative Housing Societies and \$250,000 to the Home Finance Trust. At 30 June 1970 the total debt of 72,116 individual borrowers was \$395,631,758, while indebtedness of Co-operative Housing Societies and the Home Finance Trust amounted to \$12,250,279 and \$9,680,725 respectively.

*Savings Bank of South Australia.* The bank grants mortgage loans for the building or purchase of houses for personal occupation, the maximum loan available being \$8,500 for existing houses or \$9,000 for houses not previously occupied or those to be erected. Normally advances are made up to 85 per cent of the Bank's valuation or 90 per cent where the borrower elects to insure the loan with the Housing Loan Insurance Corporation and pay the necessary premium which may be added to the loan if so desired.

The maximum loan period is thirty years at a rate of interest of  $6\frac{1}{2}$  per cent per annum; this rate is subject to review at any time. During 1969-70 the Bank advanced \$14,934,174 by way of housing loans, the number of new loans totalling 1,929. At 30 June 1970 there were 26,763 housing loans current with a balance outstanding of \$136,262,845.

*Rural and Industries Bank of Western Australia (Savings Bank Division).* The Rural and Industries Bank of Western Australia is authorised by the *Rural and Industries Bank Act, 1944-1966* to make loans from moneys on deposit with its Savings Bank Division to a person or body for the purchase or erection of a dwelling. It is the policy of the Bank to provide funds for housing primarily for occupancy by the borrower. There is no fixed limit on the amount of a loan. The average loan in the case of a brick or timber house is \$8,200. As at 30 June 1970 the rate of interest varied between  $6\frac{1}{2}$  per cent and  $7\frac{1}{2}$  per cent. Loans up to \$10,000 attracted interest at  $6\frac{1}{2}$  per cent. Loans over \$10,000 attracted interest at  $7\frac{1}{2}$  per cent. Loans may be approved up to 30 years but the average term of housing loans is eighteen years.

The bank undertakes the sub-division and development of land and the erection of homes which are sold under conditions which ensure that the purchasers are genuine home seekers. This activity commenced in May 1967. The number of homes built to 30 June 1970 was 224, whilst another 40 were under construction. Another 172 building lots (under certain restrictions) were made available to project builders for the erection and sale of houses. A further 650 building lots have been auctioned to the public under restrictions designed to favour genuine home seekers.

### Trading banks

Apart from loans by certain State banks as Government agencies (*see* pages 215-17) advances for housing to individuals are also provided by the trading banks. Amounts outstanding in respect of advances to individuals for housing purposes made by the major trading banks were \$297 million on the second Wednesday of July 1970 (*see* the chapter Private Finance for further details).

### Life insurance companies

The life insurance companies are another source of funds for housing. Details of new loans paid over during the twelve months ended June 1966 to 1970 and amounts outstanding at end of June 1966 to 1970, are given in the following table.

LIFE INSURANCE COMPANIES: HOUSING LOANS PAID OVER AND  
AMOUNTS OUTSTANDING, STATES AND TERRITORIES, 1965-66 TO 1969-70  
(\$'000)

	(a)1965-66	(a)1966-67	(a)1967-68	(a)1968-69	1969-70
Housing loans paid over during period—					
New South Wales . . . . .	24,821	22,486	23,729	29,130	33,151
Victoria . . . . .	17,112	16,843	19,471	22,549	23,791
Queensland . . . . .	(b)5,538	(b)4,856	(b)4,918	(b)6,098	6,135
South Australia . . . . .	(c)4,808	(c)4,371	(c)4,559	(c)5,366	5,415
Western Australia . . . . .	3,563	4,157	5,331	6,446	5,283
Tasmania . . . . .	1,526	1,321	1,171	1,530	1,588
Northern Territory . . . . .	(c)	(c)	(c)	(c)	132
Australian Capital Territory . . . . .	869	945	631	666	874
<i>Total</i> . . . . .	(b)58,237	(b)54,979	(b)59,810	(b)71,784	76,369
Amounts outstanding on housing loans at end of period(b) . . . . .	355,587	365,848	378,151	397,958	422,284

(a) Excludes the business of the State Government Insurance Office of New South Wales and the Queensland State Government Insurance Office. (b) Includes Papua and New Guinea. (c) Loans made in Northern Territory included in South Australia.

**Registered building societies**

There were 4,815 registered building societies operating in Australia during the year ending 30 June 1969 of which 170 are permanent societies and the remainder terminating and Starr-Bowkett societies. The permanent societies are, in the main, investment societies which make loans for housing purposes, usually on *crédit foncier* terms, and obtain their funds from share capital, deposits and borrowings from banks and other lending institutions. The terminating societies make loans to members from funds obtained from lending institutions (usually government guaranteed), members' subscriptions and, since 1956, from moneys provided under the Commonwealth-State Housing Agreements. Details of new loans paid over and net advances outstanding for each of the years ended June 1965 to 1969 are given in the following table (*see also* the Chapter Private Finance).

**REGISTERED BUILDING SOCIETIES: STATES, 1964-65 TO 1968-69**

<i>Year</i>		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>LOANS PAID OVER DURING YEAR (\$'000)</b>								
1964-65	. .	82,329	35,848	16,550	3,819	13,091	6,445	158,082
1965-66	. .	90,635	33,137	18,560	3,521	12,611	5,425	163,888
1966-67	. .	112,738	36,492	20,641	4,412	14,031	6,338	194,652
1967-68	. .	142,084	49,456	29,369	5,121	24,436	9,553	260,018
1968-69	. .	176,282	53,059	38,044	7,901	48,650	8,739	332,675
<b>NET ADVANCES OUTSTANDING(a) AT END OF YEAR (\$'000)</b>								
1964-65	. .	393,343	212,438	64,449	15,790	44,171	21,413	751,605
1965-66	. .	441,676	223,595	74,659	17,239	52,182	23,767	833,120
1966-67	. .	507,093	236,145	85,730	19,470	61,015	26,659	936,112
1967-68	. .	593,438	259,574	103,194	22,388	77,254	32,204	1,088,053
1968-69	. .	715,029	284,895	127,830	27,529	113,812	35,542	1,304,636

(a) Net of borrowing members' funds.

**Other lenders**

Little information is available on advances made by other lenders such as superannuation and other trust funds, private finance and investment companies, etc. In South Australia advances on first mortgage made by the South Australian Superannuation Fund are granted under the *Homes Act*, 1941-1968, on a *crédit foncier* basis. Loans are limited to 70 per cent of value unless repayments are insured with an approved insurer, in which case loans of up to 90 per cent of value are made. The interest rate may be varied from time to time, the present minimum rate being  $7\frac{3}{4}$  per cent per annum. The maximum term is 30 years for homes of solid construction, and 20 years for timber-framed homes. At 30 June 1970 there were 5,343 loans current, the principal outstanding totalling \$24,731,524. During 1969-70 the value of advances made was \$2,110,772.



## CHAPTER 10

### LABOUR, WAGES AND PRICES

For particulars of the Farm Production Price Index, *see* the chapter Miscellaneous. For current information on the subjects dealt with in this chapter, *see* the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics* (monthly), and the *Quarterly Summary of Australian Statistics*, also the mimeographed statements *Wage Rates and Earnings*, *Consumer Price Index*, *Wholesale Price Index of Materials used in Building other than House Building*, *Wholesale Price Index of Materials used in House Building*, *Wholesale Price Indexes—Price Index of Electrical Installation Materials*, and *Export Price Index*. For further information on these subjects, except the Export Price Index, *see* the *Labour Report* issued by this Bureau.

### RETAIL PRICES AND PRICE INDEXES

Retail prices of food and groceries and average rentals of houses for years extending back to 1901 have been collected by the Commonwealth Statistician, and in some cases were recorded by the Statisticians of various States for earlier years.

Retail prices of a more extensive range of commodities (including clothing) and certain services in common demand have been ascertained at frequent and regular intervals since 1923, and comparable information was ascertained for the month of November in each year from 1914 to 1922. The range of items for which retail prices data are obtained was considerably expanded in 1948 and in later years. Average retail prices of certain food and grocery items in current periods are published in the annual *Labour Report*.

An explanation of the nature and purposes of retail price indexes is given in the various editions of the annual *Labour Report*, together with further particulars of indexes then current. Previous retail price indexes for Australia are briefly described below. The current retail price index, entitled the Consumer Price Index, was published for the first time in August 1960. It was compiled retrospectively to 1948-49. A description of the Consumer Price Index is given on pages 222-4.

#### Previous retail price indexes

Five series of retail price indexes had been compiled at various times for Australia by the Commonwealth Statistician prior to 1960. Each of these was continued until changed conditions required the compilation of indexes more directly relevant to current conditions. The respective indexes were as follows.

- (i) *The 'A' Series Index* (covering food, groceries and house rents) was first compiled in 1912 with the year 1911 as base = 1,000. It was discontinued in June 1938.
- (ii) *The 'B' Series Index* (covering food, groceries and rent of 4 and 5 roomed houses) was first compiled in 1925 and continued until December quarter 1953. It was the food and rent constituent of the 'C' Series Index and was designed to replace the 'A' Series Index for general statistical purposes.
- (iii) *The 'C' Series Index* (covering food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, smoking, and some other miscellaneous items) was first compiled in 1921. It was last issued on its original basis for December quarter 1960. For certain transitional purposes a 'C' Series Index was issued for some quarters after that. This was calculated by varying the index numbers of December quarter 1960 in proportion to movements shown by the Consumer Price Index.
- (iv) *The 'D' Series Index*, derived by combining the 'A' and 'C' Series Indexes, was used by the Commonwealth Court of Conciliation and Arbitration from May 1933 to May 1934 and then discontinued.

- (v) *The Interim Index* (covering food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, smoking, certain services and some miscellaneous items) was first compiled in 1954 with the year 1952-53 as base = 100. As its title indicated, it was constructed as a transitional index. Its compilation was discontinued following its replacement by the Consumer Price Index in June quarter 1960.

An index of retail price movements from 1901 to 1970 is shown on page 228 of this Year Book. It is derived by linking together successive indexes (the 'A' Series, the 'C' Series and the Consumer Price Index) available for that period.

In 1937 the Commonwealth Court of Conciliation and Arbitration introduced a 'Court' Index for the purpose of its system of making automatic quarterly adjustments to the basic wage within its jurisdiction. By decision of the Court the 'Court' Index ceased to be issued by the Industrial Registrar as at December quarter 1953. These 'Court' Index numbers were an arithmetical conversion of the 'C' Series Retail Price Index.

## Consumer Price Index

This retail price index was first compiled in 1960, retrospectively to September quarter 1948. A full description of the index is given in *Labour Report* No. 54, 1968 and 1969.

### Origin

The list of component items and the weighting pattern of the 'C' Series Retail Price Index, first adopted in 1921, were slightly revised by a Conference of Statisticians in 1936, but otherwise continued almost unchanged until the index was discontinued in 1960. The reasons for this and the circumstances which led to the present Consumer Price Index appear from ensuing paragraphs.

From the outbreak of war in 1939 to late in 1948, periodic policy changes in regard to various war-time controls (including rationing) caused recurrent changes in consumption and in the pattern of expenditure. This rendered changes desirable, but made it impracticable either to produce a new index, or to revise the old one, on any basis that would render the index more representative than it already was of the changing pattern of household expenditure in those years.

When commodity rationing had virtually ceased in the latter part of 1948, action was taken by the Statistician to collect price data of about 100 additional items and to gather information about current consumption and expenditure patterns. This was done to facilitate review of the component items and weighting system of the 'C' Series Retail Price Index in the light of the new pattern of wage-earner expenditure and consumption that appeared to be emerging. But there supervened, in the next few years, conditions which caused wide price dispersion coupled with a very rapid rise in prices and a new sequence of changes in consumption and in the pattern of wage-earner expenditure. Under these conditions it was not possible to devise any new weighting pattern likely to be more continuously representative of conditions then current than was the existing 'C' Series Retail Price Index on the 1936 revision.

A Conference of Statisticians considered the matter in June 1953, and resolved (in part) as follows:

- '(a) that, in view of the persistence of recurrent changes in the pattern of consumer expenditure in the post-war period it is undesirable to make a general revision of the list of items and weighting system of the 'C' Series Retail Price Index at present, unless industrial tribunals expressly desire some revision for special purposes;
- (b) that an Interim Retail Price Index be compiled with putative weights and components representative, as nearly as may be, of the post-war pattern of consumer usage and expenditure.'

The 'C' Series Index continued to be compiled on its pre-war basis without significant change in procedures. The Interim Retail Price Index was introduced in 1954 and continued until March quarter 1960.

The Interim Index was a transitional index designed to measure retail price variations on the 'C' Series model in terms of post-war consumption weights as emerging in the early 1950's. It embraced a wider range of commodities and services than did the 'C' Series Retail Price Index, but it did not take into account successive major changes in the pattern of expenditure and modes of living that began to occur early in 1950 and through to 1960. These changes could not in fact be detected and measured promptly and incorporated into an index concurrently with their happening. Nor was it envisaged as desirable to adopt fundamentally new procedures in price index construction until it was fully evident that far-reaching procedural changes were necessary to meet the situation that had developed between about 1950 and 1960.

In this period home-owning largely replaced house-renting, the use of the motor car greatly increased and partly replaced use of public transport, and various items of electrical household equipment and television came into widespread use. The impact of these (and other) changes in usage upon the pattern of household expenditure was heightened by disparate movements in prices. Together, they rendered nugatory the attempt to meet the situation by devising a single Interim Retail Price Index. As studies progressed and new data became available it was clear that no single list of items and no single set of fixed weights would be adequately representative as a basis for measuring retail price changes at all times throughout the post-war period. In consequence, the situation was met by compiling the Consumer Price Index constructed as a chain of linked indexes with significant changes in composition and weighting effected at short intervals.

#### **Purpose, scope and composition**

The Consumer Price Index is a quarterly measure of variations in retail prices for goods and services representing a high proportion of the expenditure of wage-earner households. The weighting pattern relates to estimated aggregates of wage-earner household expenditures and not to estimated expenditures of an 'average' or individual household of specified size, type, or mode of living. In this way it is possible to give appropriate representation to owner-occupied houses as well as rented houses and to include motor cars, television sets, and other major expenditures which relate to some households and not to others.

Consumer (retail) price indexes are sometimes loosely called 'cost of living indexes' and are thought to measure changes in the 'cost of living'. Neither the Consumer Price Index nor any other retail price index measures those changes in the cost of living that result directly from changes in the mode or level of living. Changes of that kind are matters for consideration apart from price indexes, but the change in prices of goods and services is a very important part of the change in the cost of living and this part is measured by consumer (retail) price indexes.

The Consumer Price Index covers a wide range of commodities and services arranged in the following five major groups:

- Food;
- Clothing and drapery;
- Housing;
- Household supplies and equipment;
- Miscellaneous.

These groups do not include every item of household spending. It is both impracticable and unnecessary for them to do so. Prices are collected regularly for specified quantities and qualities of a large and representative selection of commodities and services. Movements in the prices of these items, when combined in suitable proportions, provide a representative measure of price change as affecting a high proportion of the expenditure of wage-earner households.

Index numbers for sub-groups and special groupings have been compiled and published for the six State capital cities combined for each quarter from December quarter 1963. From December quarter 1968 onwards, information of contributions by index sub-groups to the total index in terms of All Groups Index Points has also been published. These details are shown in the tables on pages 30-34 respectively, of *Labour Report* No. 54, 1968 and 1969.

Users of these figures should bear in mind that the Consumer Price Index is designed to measure the proportionate change in retail prices as combined in the five major groups and more particularly the total of the groups. For sub-groups or particular items, the index does not necessarily provide comprehensive and valid measures of price changes in those particular fields. Nor does it necessarily measure the relative influences of those classes of items in aggregate variations in prices. The Consumer Price Index is essentially a combination of selected items under various headings and not a dissection of total household expenditure into its component parts. Details of index numbers for sub-groups and special groupings are published to assist interpretation of movements shown by the Consumer Price Index and also to provide additional data of changes in retail prices.

#### **Structure—a chain of linked indexes**

Substantial changes have occurred in consumer usage and patterns of expenditure since the 1939-45 War. In order to keep the weighting pattern representative of current expenditures it has been necessary to construct indexes with additional items and changes in the weighting pattern at intervals, rather than on the basis of a list of items and set of weights that remained unchanged throughout the whole period covered. For the six State capital cities six series for short periods (namely, from the September quarter of 1948 to the June quarter of 1952, from the June quarter of 1952 to the June quarter of 1956, from the June quarter of 1956 to the March quarter of 1960, from



the March quarter of 1960 to the December quarter of 1963, from the December quarter of 1963 to the December quarter of 1968, and from the December quarter of 1968 onwards) have therefore been constructed and linked to form a continuous retail price index series known as the Consumer Price Index. (For information regarding these links for Canberra see *Labour Report* No. 54, 1968 and 1969).

During each period between links the items and weighting remained unchanged. At times of linking the weighting pattern was altered, and new items (mainly ones that had become significant in household expenditure) were introduced. Under this method, in effect, average percentage price movements are assessed on one pattern up to the time of the link and on another pattern thereafter. The process of linking ensures that the series reflects only price variations and not differences in cost of the old and new lists of items. The introduction of new items and weights by linking does not, of itself, raise or lower the level of the index.

### Tabular statements of retail price index numbers

#### Consumer Price Index

The index has been compiled for each quarter from September quarter 1948 and for each year from 1948-49. 'All Groups' index numbers and 'Group' index numbers for each of the five major groups are compiled and published regularly for the six State capital cities combined and separately and for Canberra. Index numbers for sub-groups and special groupings of the Consumer Price Index for the six State capital cities combined have been compiled and published for each quarter from December quarter 1963 and for each year from 1966-67. The reference base for these indexes is: Year 1966-67 = 100.0.

Index numbers for each quarter are first issued in mimeographed statistical bulletins available from the Commonwealth Statistician about three weeks after the end of the quarter. These bulletins contain comment on the index and on significant price movements in that quarter. Tables showing index numbers for preceding quarters and years are presented.

The tables on the following pages show Consumer Price Index Numbers (Total All Groups) for the six State capital cities combined and separately and for Canberra for periods from the year 1953-54 (see page 225), Consumer Price Index Group Index Numbers for the six State capital cities combined for periods from the year 1953-54 (see page 226), and Consumer Price Index Group Index Numbers for each State capital city and for Canberra for recent years and quarters (see page 227).

**CONSUMER PRICE INDEX: ALL GROUPS INDEX NUMBERS**  
**SIX STATE CAPITAL CITIES AND CANBERRA, YEARS 1953-54 TO 1969-70 AND QUARTERS**  
**MARCH 1966 TO DECEMBER 1970**

*(Base of each index: Year 1966-67 = 100.0)(a)*

The separate city indexes measure price movements within each city individually. They do not compare price levels as between cities.

<i>State Capital Cities—Combined and Separately</i>										
<i>Period</i>	<i>Six State Capital Cities(b)</i>	<i>Sydney</i>	<i>Mel- bourne</i>	<i>Bris- bane</i>	<i>Adel- aide</i>	<i>Perth</i>	<i>Hobart</i>	<i>Can- berra</i>		
<b>Year—</b>										
1953-54 . . . .	73.5	74.5	72.5	70.9	74.7	74.6	74.4	76.5		
1954-55 . . . .	74.0	75.0	72.5	71.4	75.6	76.3	74.3	77.5		
1955-56 . . . .	77.0	77.5	76.8	73.8	78.1	78.3	78.1	80.2		
1956-57 . . . .	81.5	82.8	81.0	77.8	81.2	81.8	82.8	84.3		
1957-58 . . . .	82.3	84.0	81.3	79.4	81.8	82.4	82.9	84.8		
1958-59 . . . .	83.6	84.6	82.9	82.1	83.6	83.2	84.1	85.8		
1959-60 . . . .	85.7	86.5	85.3	84.2	86.2	84.8	85.6	87.6		
1960-61 . . . .	89.2	89.6	89.5	87.1	89.8	87.9	90.3	90.3		
1961-62 . . . .	89.6	89.9	89.8	88.4	89.5	88.2	90.7	91.6		
1962-63 . . . .	89.8	90.4	89.7	88.7	89.1	88.7	90.7	91.8		
1963-64 . . . .	90.6	91.4	90.4	89.6	90.2	89.8	91.7	92.5		
1964-65 . . . .	94.0	94.5	94.0	93.0	93.9	92.6	94.6	95.3		
1965-66 . . . .	97.4	97.7	97.5	97.5	97.0	96.1	98.0	98.1		
1966-67 . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
1967-68 . . . .	103.3	103.2	103.7	103.3	102.9	102.9	104.6	102.6		
1968-69 . . . .	106.0	106.2	106.2	105.5	105.3	105.5	106.1	104.4		
1969-70 . . . .	109.4	110.6	108.7	108.4	108.2	109.4	108.5	107.4		
<b>Quarter—</b>										
1966—March . .	97.6	97.8	97.5	98.2	97.2	96.3	97.8	98.2		
June . . . . .	98.4	98.3	98.4	98.4	98.2	98.1	98.7	98.5		
September . .	98.8	98.8	98.9	99.0	98.6	98.8	98.6	98.9		
December . . .	99.7	99.9	99.6	99.7	99.7	99.3	99.2	99.7		
1967—March . .	100.1	100.1	100.0	100.3	100.2	100.3	100.6	100.1		
June . . . . .	101.3	101.1	101.6	101.0	101.5	101.6	101.5	101.3		
September . .	102.7	102.5	102.9	102.8	102.6	102.0	104.3	102.2		
December . . .	103.0	102.9	103.3	103.0	102.1	102.5	105.0	102.4		
1968—March . .	103.4	103.2	103.8	103.7	102.6	103.1	104.6	102.6		
June . . . . .	104.2	104.0	104.8	103.7	104.2	104.0	104.6	103.2		
September . .	104.6	104.4	105.1	104.7	104.2	104.3	105.0	103.5		
December . . .	105.7	105.9	106.0	105.3	105.2	104.9	105.8	103.9		
1969—March . .	106.4	106.7	106.6	105.8	105.5	105.6	106.5	104.8		
June . . . . .	107.2	107.6	107.2	106.3	106.4	107.0	107.0	105.2		
September . .	107.8	108.4	107.6	107.2	106.9	107.7	107.4	106.0		
December . . .	108.7	109.6	108.3	107.9	107.3	108.7	108.1	106.7		
1970—March . .	109.8	111.3	108.9	108.9	108.4	109.9	108.9	108.0		
June . . . . .	111.2	112.9	110.1	109.7	110.0	111.4	109.6	109.0		
September . .	111.9	113.9	110.7	111.1	109.9	111.6	110.2	109.7		
December . . .	114.0	116.2	112.6	113.3	111.8	113.5	112.4	113.2		

(a) Figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted to avoid distortions that would occur in rounding off the figures to the nearest whole number. (b) Weighted average.

**CONSUMER PRICE INDEX: GROUP INDEX NUMBERS**  
**WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES, YEARS 1953-54 TO 1969-70**  
**AND QUARTERS MARCH 1966 TO DECEMBER 1970**

(Base of each index: Year 1966-67 = 100.0) (a)

<i>Period</i>	<i>Food</i>	<i>Clothing and drapery</i>	<i>Housing</i>	<i>Household supplies and equipment</i>	<i>Miscel- laneous</i>	<i>All groups</i>
<b>Year—</b>						
1953-54 . . . . .	73.2	84.3	58.5	88.3	67.1	73.5
1954-55 . . . . .	73.7	84.5	60.5	88.1	67.1	74.0
1955-56 . . . . .	77.8	85.4	64.2	88.3	71.1	77.0
1956-57 . . . . .	81.5	86.9	68.1	92.0	79.3	81.5
1957-58 . . . . .	80.1	89.5	71.0	93.4	80.4	82.3
1958-59 . . . . .	81.6	90.5	72.9	94.4	81.4	83.6
1959-60 . . . . .	84.7	91.5	75.4	95.4	83.2	85.7
1960-61 . . . . .	90.2	93.4	80.8	96.6	85.5	89.2
1961-62 . . . . .	88.6	94.4	84.0	97.9	86.1	89.6
1962-63 . . . . .	87.8	94.7	86.5	97.7	86.6	89.8
1963-64 . . . . .	89.0	95.3	89.1	96.4	87.3	90.6
1964-65 . . . . .	93.9	96.8	92.0	97.2	91.4	94.0
1965-66 . . . . .	98.4	97.9	95.9	98.9	95.8	97.4
1966-67 . . . . .	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . . . . .	104.7	102.2	104.5	101.2	102.8	103.3
1968-69 . . . . .	105.8	104.3	109.1	102.9	107.5	106.0
1969-70 . . . . .	108.1	107.5	115.5	104.1	111.6	109.4
<b>Quarter—</b>						
1966—March . . . . .	97.8	97.8	96.2	98.8	97.2	97.6
June . . . . .	98.8	98.7	97.8	99.5	97.3	98.4
September . . . . .	98.7	98.9	98.5	99.7	98.7	98.8
December . . . . .	99.4	99.8	99.5	100.0	100.0	99.7
1967—March . . . . .	100.0	100.2	100.1	99.9	100.3	100.1
June . . . . .	101.9	101.1	101.8	100.4	101.0	101.3
September . . . . .	104.8	101.4	102.9	100.6	101.8	102.7
December . . . . .	103.9	102.1	104.2	101.1	102.8	103.0
1968—March . . . . .	104.6	102.3	104.7	101.1	103.1	103.4
June . . . . .	105.6	102.8	106.0	101.9	103.6	104.2
September . . . . .	105.3	103.3	106.7	102.1	105.1	104.6
December . . . . .	105.5	104.1	108.7	102.7	107.3	105.7
1969—March . . . . .	105.7	104.4	109.7	103.0	108.5	106.4
June . . . . .	106.6	105.2	111.2	103.7	108.9	107.2
September . . . . .	106.6	106.0	112.8	103.7	110.0	107.8
December . . . . .	107.1	107.2	114.7	103.9	110.9	108.7
1970—March . . . . .	108.7	107.9	116.2	104.0	112.0	109.8
June . . . . .	110.1	108.9	118.3	104.7	113.5	111.2
September . . . . .	110.9	109.2	120.2	105.4	113.7	111.9
December . . . . .	112.0	110.9	122.7	106.6	117.5	114.0

(a) Figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted to avoid distortions that would occur in rounding off the figures to the nearest whole number.



**CONSUMER PRICE INDEX: GROUP INDEX NUMBERS**  
**SIX STATE CAPITAL CITIES AND CANBERRA, YEARS 1948-49 TO 1969-70**  
**AND QUARTERS MARCH TO DECEMBER 1970**

*(Base of each index: Year 1966-67 = 100.0) (a)*

The index numbers hereunder are designed to measure movements in retail prices of specified groups of items for specified cities individually. They measure variations from time to time and not differences in price level as between cities.

City	Year						1970			
	1948-49	1965-66	1966-67	1967-68	1968-69	1969-70	March qtr	June qtr	Sept qtr	Dec. qtr
<b>FOOD GROUP</b>										
Six State Capitals(b)	38.2	98.4	100.0	104.7	105.8	108.1	108.7	110.1	110.9	112.0
Sydney	37.9	98.8	100.0	103.9	104.9	107.8	109.0	110.0	110.8	112.2
Melbourne	38.9	99.0	100.0	106.3	107.3	109.1	109.2	110.9	112.2	112.8
Brisbane	36.8	98.4	100.0	103.7	104.7	107.7	108.6	109.1	110.5	112.8
Adelaide	38.6	97.1	100.0	104.7	106.4	107.1	107.1	108.6	108.2	108.8
Perth	38.4	95.2	100.0	102.9	104.5	108.1	108.4	111.0	111.2	111.3
Hobart	39.1	98.9	100.0	106.8	105.3	106.4	106.9	106.9	108.4	110.1
Canberra	37.6	98.0	100.0	104.3	105.1	107.0	107.4	108.5	109.5	110.7
<b>CLOTHING AND DRAPERY GROUP</b>										
Six State Capitals(b)	48.9	97.9	100.0	102.2	104.3	107.5	107.9	108.9	109.2	110.9
Sydney	49.0	97.7	100.0	102.2	104.2	107.5	107.9	108.8	109.2	110.9
Melbourne	48.6	98.0	100.0	102.1	104.2	107.4	107.8	108.8	109.0	110.7
Brisbane	47.8	97.8	100.0	102.4	104.3	107.3	107.7	108.8	109.2	110.9
Adelaide	49.4	97.8	100.0	102.2	104.5	108.1	108.4	109.8	110.0	111.6
Perth	50.6	97.9	100.0	102.1	104.5	107.8	108.0	109.1	109.4	111.2
Hobart	48.2	98.0	100.0	102.4	104.5	107.9	108.2	109.4	109.5	111.0
Canberra	49.5	97.9	100.0	102.3	104.2	107.5	107.9	109.0	109.2	110.7
<b>HOUSING GROUP</b>										
Six State Capitals(b)	40.5	95.9	100.0	104.5	109.1	115.5	116.2	118.3	120.2	122.7
Sydney	41.1	95.3	100.0	105.0	110.5	119.9	120.8	124.8	128.1	130.1
Melbourne	41.3	96.3	100.0	103.8	107.9	112.2	112.6	113.7	114.4	117.6
Brisbane	41.3	97.3	100.0	105.8	109.6	113.4	113.6	114.1	115.9	116.8
Adelaide	38.4	95.7	100.0	102.1	104.7	109.3	109.9	111.0	111.7	116.0
Perth	36.1	95.4	100.0	105.8	112.7	120.1	121.2	122.7	122.7	125.5
Hobart	36.8	97.1	100.0	103.6	108.4	112.6	113.2	114.1	115.0	117.0
Canberra	41.8	98.6	100.0	100.4	101.9	104.6	106.0	106.4	106.9	118.8
<b>HOUSEHOLD SUPPLIES AND EQUIPMENT GROUP</b>										
Six State Capitals(b)	58.3	98.9	100.0	101.2	102.9	104.1	104.0	104.7	105.4	106.6
Sydney	59.7	99.3	100.0	101.2	103.0	104.8	105.0	105.5	106.5	108.6
Melbourne	55.0	98.7	100.0	101.4	102.9	103.5	103.1	103.8	104.4	105.1
Brisbane	58.9	98.8	100.0	101.2	104.3	105.5	105.5	105.9	106.5	107.5
Adelaide	64.9	99.2	100.0	100.3	101.1	102.0	101.9	102.9	103.5	104.3
Perth	60.4	98.3	100.0	100.7	102.1	103.7	103.8	104.8	105.8	106.7
Hobart	53.4	98.6	100.0	102.9	104.5	106.1	106.3	106.9	107.6	108.4
Canberra	61.4	99.7	100.0	100.4	100.6	101.9	101.9	102.5	104.0	104.2
<b>MISCELLANEOUS GROUP</b>										
Six State Capitals(b)	44.7	95.8	100.0	102.8	107.5	111.6	112.0	113.5	113.7	117.5
Sydney	46.5	96.4	100.0	103.0	108.5	113.7	114.3	116.1	116.4	120.4
Melbourne	42.2	95.1	100.0	102.5	107.3	110.2	110.3	111.5	111.6	115.0
Brisbane	44.4	95.5	100.0	103.2	106.0	109.2	109.5	110.7	112.9	116.6
Adelaide	47.1	95.7	100.0	102.6	107.0	112.0	112.4	114.8	114.2	117.3
Perth	45.4	95.3	100.0	103.2	105.6	109.8	110.5	111.5	110.9	115.2
Hobart	43.5	96.7	100.0	104.5	108.0	111.0	111.2	112.5	112.2	116.3
Canberra	50.2	97.1	100.0	103.0	107.0	112.4	113.1	114.3	114.7	119.3

(a) Figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted to avoid distortions that would occur in rounding off the figures to the nearest whole number. (b) Weighted average.

### Retail Price Index Numbers, 1901 to 1970

The index numbers shown below are presented as a continuous series, but they give only a broad indication of long-term trends in retail price levels. They are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are: from 1901 to 1914, the 'A' Series Retail Price Index; from 1914 to 1946-47, the 'C' Series Retail Price Index; from 1946-47 to 1948-49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series Index excluding Rent; and from 1948-49 onwards, the Consumer Price Index.

#### RETAIL PRICE INDEX NUMBERS: SIX STATE CAPITAL CITIES COMBINED, 1901 TO 1970 (Base: Year 1911 = 100)

Year	Index number	Year	Index number	Year	Index number
1901	88	1924	164	1947	198
1902	93	1925	165	1948	218
1903	91	1926	168	1949	240
1904	86	1927	166	1950	262
1905	90	1928	167	1951	313
1906	90	1929	171	1952	367
1907	90	1930	162	1953	383
1908	95	1931	145	1954	386
1909	95	1932	138	1955	394
1910	97	1933	133	1956	419
1911	100	1934	136	1957	429
1912	110	1935	138	1958	435
1913	110	1936	141	1959	443
1914(a)	114	1937	145	1960	459
1915(a)	130	1938	149	1961	471
1916(a)	132	1939	153	1962	469
1917(a)	141	1940	159	1963	472
1918(a)	150	1941	167	1964	483
1919(a)	170	1942	181	1965	502
1920(a)	193	1943	188	1966	517
1921(a)	168	1944	187	1967	534
1922(a)	162	1945	187	1968	548
1923	166	1946	190	1969	564
				1970	586

(a) November.

### International comparisons

The following table shows index numbers of consumer (retail) prices for various countries. Except where otherwise noted, the year 1963 is taken as base (= 100). The index numbers show fluctuations in prices in each country, and do not measure relative price levels as between countries.

#### INDEX NUMBERS OF CONSUMER (RETAIL) PRICES IN VARIOUS COUNTRIES ALL GROUPS INDEXES, 1962 TO 1970

(Source: *Monthly Bulletin of Statistics* of the Statistical Office of the United Nations)  
(Base of each index: Year 1963 = 100)

Period	Argentina (Buenos Aires)	Australia (a)	Belgium	Brazil (Sao Paulo)	Canada	France	Germany, Federal Republic	India (b)	Indonesia (Djakarta)	Ireland	Italy
1962	81	100	98	58	98	95	97	97	46	98	93
1963	-100	-100	100	100	100	100	100	100	100	100	100
1964	122	102	104	187	102	103	102	113	205	107	106
1965	157	106	108	302	104	106	106	124	830	112	111
1966	207	110	-113	443	108	109	110	137	9,502	115	-113
1967	268	113	116	574	112	112	111	156	25,612	119	118
1968	311	-116	119	714	117	117	113	160	57,712	-125	119
1969	335	120	124	879	122	124	116	175	61,250	134	122
1970	380	124	129	1,047	126	131	121	184	68,806	145	128
1970—											
Qu—											
March	356	122	127	986	125	129	119	178	69,284	139	126
June	366	124	128	1,025	126	130	120	183	68,319	144	128
Sept.	378	124	129	1,065	127	132	121	187	68,392	147	129
Dec.	420	127	130	1,113	126	133	122	188	69,228	150	131

For footnotes see next page.

**INDEX NUMBERS OF CONSUMER (RETAIL) PRICES IN VARIOUS COUNTRIES  
ALL GROUPS INDEXES, 1962 TO 1970—continued**

Period	Japan (c)	Nether- lands	New Zealand	Norway	Pakistan (Kara- chi)	Philip- pines (Manila) (d)	Republic of South Africa (e)	Sweden	Switzer- land	United King- dom	United States of America (f)
1962 .	93	96	98	98	99	95	99	97	97	98	99
1963 .	100	100	100	100	100	100	100	100	100	100	100
1964 .	104	106	104	106	104	133	103	103	103	103	-101-
1965 .	111	111	-107-	110	110	139	106	109	107	108	103
1966 .	116	117	110	114	118	145	110	116	-112-	113	106
1967 .	121	-121-	117	119	126	155	114	121	116	115	109
1968 .	128	126	122	123	126	156	116	123	119	121	114
1969 .	134	135	128	127	130	161	119	126	122	127	120
1970 .	144	141	136	140	137	168	125	135	126	135	127
1970— Qtr—											
March	141	138	132	137	134	165	122	132	124	132	124
June .	143	140	134	138	136	169	-125.3-	134	125	135	126
Sept. .	145	142	136	141	139	170	126.5	136	127	136	128
Dec. .	149	144	142	144	140	173	127.8	138	129	139	129

(a) Consumer Price Index converted to base 1963 = 100 by Commonwealth Statistician. (b) Beginning 1969, new index—base: 1960 = 100. (c) Prior to 1964, 28 cities only. (d) Beginning 1964, new index—base: 1961 = 100. (e) Index for Europeans only. (f) Prior to 1964 excluding Alaska and Hawaii.

NOTE. Symbol — on each side of an index number (e.g. -95-) indicates that two series have been linked during that period. Symbol — between two index numbers indicates that it is not possible to link two series (because of change in scope, etc.) and therefore the index numbers are not comparable with each other even though they may be shown on the same base period.

## WHOLESALE PRICES AND PRICE INDEXES

Two indexes of wholesale prices of basic materials have been compiled by the Commonwealth Bureau of Census and Statistics. These are:

- (i) the Melbourne Wholesale Price Index;
- (ii) the Wholesale Price (Basic Materials and Foodstuffs) Index.

New series of wholesale price index numbers relating to materials used and articles produced by defined areas of the economy are being developed. Two such indexes have already been published. They are the Price Index of Materials used in Building other than House Building (issued April 1969) and the Price Index of Materials used in House Building (issued November 1970). Work continues on the preparation of further measures.

A special purpose index 'Wholesale Price Index of Electrical Installation Materials' is also published by the Bureau (see page 237).

### Melbourne Wholesale Price Index

An index of Melbourne wholesale prices was first compiled in 1912. It related chiefly to basic materials and foods weighted in accordance with consumption in the years immediately preceding that year. Neither the list of items nor the weighting was varied, except for some changes in the building materials group in 1949. The series has some historical significance as a measure of changes, since the year 1861, in the prices of its component items combined in the proportions in which they were in common use about the year 1910. A description of the index and a list of the commodities included in it were published in *Labour Report* No. 38, 1949, pages 43-5. Index numbers up to the year 1961, the last period for which the index was compiled, were published in *Year Book* No. 48, 1962.

### Wholesale Price (Basic Materials and Foodstuffs) Index

General publication of this index was discontinued with the issue of index numbers for the month of December 1970. Index numbers up to that period may be found in the mimeographed bulletin *Wholesale Price (Basic Materials and Foodstuffs) Index* (Reference No. 9.4) or in the printed publications *Monthly Review of Business Statistics* and *Quarterly Summary of Australian Statistics*.



The index related to commodities priced in their primary or basic form wherever possible and as nearly as might have been at the point where they first made effective impact on the local price structure. With a few important exceptions, prices were from Melbourne sources. The weights were based on estimates of the average annual consumption of the commodities in Australia during the period 1928-29 to 1934-35 inclusive.

A list of the commodities and other information concerning the Wholesale Price (Basic Materials and Foodstuffs) Index is given in *Labour Report No. 53*, 1967, pages 38-41.

## Wholesale Price Index of Materials used in Building other than House Building

### General

This index was introduced in April 1969 and relates to the construction of buildings other than houses. Further information concerning the method of compiling the index, as well as more detailed group index numbers for each capital city, will be found in the publication *Price Index of Materials used in Building other than House Building* (Reference No. 9.6) of 23 April 1969 and subsequent issues, as well as in the *Labour Report No. 54*, 1968 and 1969.

### Scope and composition

The index measures changes in prices of selected materials used in the construction of buildings other than houses and 'low-rise' flats (in general, those up to three storeys). Its composition is in accordance with the materials usage in actual building projects which were selected as representative for the purpose.

The index includes 72 items, combined in eleven groups, in addition to an 'All Groups' index. Some items carry the weights of similar items not directly priced. Items are described in terms of fixed specifications with the aim of recording price changes for representative materials of constant quality.

Although the selected materials (or many of them) are also used in house (and low-rise flat) building, in building repair, maintenance and alteration work, and in 'engineering construction' work (e.g. projects such as roads, dams, bridges and the like), the weighting pattern of the index, being designed for the specific purpose mentioned in the first paragraph of this Section, is not applicable to these other activities of the Construction industry. In addition, since the weights are based on an average materials usage over a range of building 'use-types' (e.g. office building, factory, etc.), the index is not necessarily applicable to any specific building or any particular type of building.

### Base period and method of calculation

The reference base of the index is the year 1966-67 = 100.0. The weighting base corresponds broadly with the reference base, but does not exactly coincide because of the nature of the data from which the weights were derived.

The index is a fixed-weights index and is calculated by the method known as 'the weighted arithmetic mean of price relatives'.

### Derivation of items and weights

The items and weights used in the index were derived from reported values of each material used in selected representative buildings constructed in or about 1966-67. The selection took account of building use-type and construction characteristics (e.g. type of frame, wall, floor, etc.) within use-types. Information of the former was obtained from building statistics, and of the latter from an ad hoc survey of approximately 800 buildings.

### The weights

The weighting pattern used in the index is given in Year Book No 55, pages 1259-60. This single weighting pattern, relating to the whole of Australia, is applied (with minor exceptions) to local price measures in calculating indexes for each State capital city.

The index for the six State capital cities combined is a weighted average of individual city indexes. The relative weighting of the capitals is in proportion to the estimated value on completion of building other than house building in the separate States during the three years ended June 1967.

# Prices

Prices are collected as at the mid-point of the month to which the index refers, or as near thereto as practicable. They relate to specified standards of each commodity and are obtained in all State capital cities from representative suppliers of materials used in building. There are, however, some exceptions to the use of local prices in the indexes for each capital city. The main exception is that, for each city, the whole of the group Electrical Installation Materials and the majority of the items in the group Mechanical Services Components are based on Sydney and Melbourne price series.

# Index numbers

The index has been compiled for each month from July 1966, and for the financial years from 1966-67. Index numbers for the individual groups and all groups for the weighted average of the six State capital cities, and for all groups combined for each State capital city, are given in the following tables. Figures are published to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

The separate city indexes measure price movements in each State capital city individually. They enable comparisons to be drawn between capitals as to differences in degree of price movement from period to period, but not as to differences in price level.

## WHOLESALE PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING

### GROUP INDEX NUMBERS—WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES YEARS 1966-67 TO 1969-70 AND MONTHS JULY 1970 TO JANUARY 1971

(Base of each Index: Year 1966-67 = 100.0)(a)

Period	Concrete mix, cement, sand, etc.	Cement products	Bricks, stone, etc.	Timber, board and joinery	Steel and iron products	Aluminium products
1966-67 . . .	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . . .	101.5	102.2	103.7	103.0	102.3	101.4
1968-69 . . .	103.5	106.8	108.2	107.2	106.1	103.9
1969-70 . . .	106.9	111.7	112.6	111.2	110.1	107.4
1970-71—						
July . . .	107.4	113.5	115.8	112.8	113.1	109.5
August . . .	108.1	115.2	115.9	112.8	113.7	110.1
September . . .	108.9	115.6	116.7	112.9	113.9	110.1
October . . .	109.4	115.9	117.2	113.9	114.1	110.6
November . . .	110.5	116.2	117.3	114.6	114.4	111.2
December . . .	110.9	116.7	117.7	115.1	114.6	111.3
January . . .	114.7	118.4	118.6	116.1	115.9	113.8

Period	Other metal products	Plumbing fixtures	Miscellaneous materials	Electrical installation materials	Mechanical services components	All groups
1966-67 . . .	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . . .	105.9	102.8	102.3	100.9	101.4	102.2
1968-69 . . .	106.8	103.3	103.2	102.1	107.7	105.6
1969-70 . . .	126.3	113.7	105.8	112.2	111.8	110.5
1970-71—						
July . . .	125.6	117.3	107.8	113.6	115.6	112.8
August . . .	125.6	117.1	107.8	113.0	116.3	113.2
September . . .	123.9	117.2	108.1	111.5	116.7	113.3
October . . .	123.2	118.8	108.3	109.9	116.1	113.4
November . . .	120.7	119.4	108.7	109.6	116.8	113.8
December . . .	120.1	119.8	108.9	109.4	117.0	114.0
January . . .	121.4	119.9	109.5	109.7	118.9	115.5

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

# WHOLESALE PRICE INDEX OF MATERIALS USED IN BUILDING OTHER THAN HOUSE BUILDING

## ALL GROUPS INDEX NUMBERS—SIX STATE CAPITAL CITIES YEARS 1966-67 TO 1969-70 AND MONTHS JULY 1970 TO JANUARY 1971

(Base of each Index: Year 1966-67 = 100.0)(a)

NOTE. The separate city indexes measure price movements within each city individually. They do not compare price levels as between cities.

Period	State capital cities						Weighted average of six State capital cities
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	
1966-67 . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . . .	102.6	101.7	102.2	101.8	102.0	102.3	102.2
1968-69 . . .	106.5	105.0	105.1	105.0	104.7	105.1	105.6
1969-70 . . .	111.7	109.8	110.3	109.4	108.9	109.7	110.5
1970-71—							
July . . .	114.3	111.3	113.4	111.3	110.9	112.6	112.8
August . . .	114.4	112.0	114.4	111.4	111.1	112.7	113.2
September . . .	114.4	112.4	114.5	111.4	111.0	112.9	113.3
October . . .	114.2	112.9	114.5	111.7	110.9	112.8	113.4
November . . .	114.5	113.3	114.7	112.3	112.0	114.0	113.8
December . . .	114.5	113.5	115.2	112.4	112.5	114.2	114.0
January . . .	116.7	114.7	116.2	113.2	113.6	115.1	115.5

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

## Wholesale Price Index of Materials used in House Building

### General

This index, referring to materials used in house building, was introduced in November 1970 and is complementary to the Price Index of Materials used in Building other than House Building. It is the second in a series of indexes being prepared as circumstances permit and relating to materials used and articles produced by important and defined areas of the economy.

Further information concerning the method of compiling the Index, as well as more detailed group index numbers and the separate weighting patterns for the six State capital cities, will be found in the publication *Price Index of Materials used in Housing Building* (Reference No. 9.9) of 27 November 1970. This and current subsequent issues are available on request.

### Scope and composition

The index measures changes in prices of selected materials used in the construction of houses. Its composition is in accordance with the usage of materials in actual houses which were selected as representative for the purpose. The index does not purport to represent buildings of any kind other than houses. The house building construction types included are those which use brick, brick veneer, timber or asbestos cement sheeting as the principal material for the outer walls.

The numbers of items included in the lists for the respective State capital cities vary between 49 and 51. In all cases the selection of materials was based on local usage. Items are combined in eleven groups in addition to the 'All Groups' index. Some items carry the weight of similar items not directly priced. They are described in terms of fixed specifications with the aim of recording price changes for representative materials of constant quality.

### Base period and method of calculation

In the interests of uniformity and ease of use, the reference base of the index is the year 1966-67 = 100.0, the same as that used for the Price Index of Materials used in Building other than House Building. However, because of the later time at which the weighting source data were collected, the weighting base approximates more closely to the year 1968-69.



The index is a fixed weights index and is calculated by the method known as 'the weighted arithmetic mean of price relatives'.

### Derivation of items and weights

The items and weights used in the index were derived from reported values of each material used in selected representative houses constructed in or about 1968-69 in each State capital city. The selection took account, within the four major construction types, of a range of characteristics of these houses—e.g. internal partitions, windows, roofing, etc., as well as whether such things as paths and fences were included in the job. Information of this nature was obtained from an ad hoc survey of some 250 house builders from whom data regarding approximately 900 houses representative of their operations were obtained. The survey was conducted in all State capital cities.

The analysis form used to obtain particulars of materials used in each subsequently selected house building was set out on a 'trades' basis as in a Bill of Quantities, using trades headings broadly based on those set out in the second edition of the *Australian Standard Method of Measurement of Building Works* (The Institute of Quantity Surveyors (Aust.) and The Master Builders' Federation of Australia; March, 1963). Under each heading it was required that each material used in that particular phase of building should be specified, together with its value.

Satisfactory analyses of materials used were received for 114 house buildings, this number being spread over all six State capital cities. Data obtained in each capital were used to construct for that city its own list of items and its individual weighting pattern. As a first step for each State capital city, the many different varieties, etc., of materials reported were classified into index items, and groupings thereof determined. The values of each material used as obtained from analyses of houses of each of the four major construction types (brick, brick veneer, timber, asbestos cement sheeting) were then combined for each city according to survey results to give construction-type usage patterns. Next, these were amalgamated to produce weighting patterns for the respective cities. The amalgamation was in accordance with the relative importance of each construction type in each given State capital city as indicated by statistics of the value of houses completed in the city in 1968-69. (For practical reasons these two weighting operations were in fact carried out as one). The weighting pattern then derived for the weighted average of the six State capital cities is an aggregation of the individual city patterns, the weight given to each item being proportional to its estimated importance in materials usage in houses completed of the types specified in the six capital cities in 1968-69. In that year the four major construction types mentioned above constituted more than ninety-nine per cent of all house building in the six capitals for which indexes have been prepared.

The group and item weights used in the index for each State capital city are given in the publication referred to in paragraph 2 of 'General' above. The pattern resulting from their aggregation over the six State capitals is given on pages 236-7. Each State capital city has a unique weighting pattern which reflects the difference in the estimated relative importance of given items as between cities. The weighting pattern for each capital city is applied to local price measures in calculating indexes for that city.

### Prices

Price series used relate to specified standards of each commodity and are obtained in all State capital cities from representative suppliers of materials used in house building. In the main they are collected as at the mid-point of the month to which the index refers, or as near thereto as practicable.

The point of pricing adopted for the new index is in keeping with sector wholesale price index concept. In terms of this concept a 'ring-fence' is set up around house building. The items to be priced for index purposes are then those materials which are used in building activity within the ring-fence, and the point of pricing is that at which the materials cross the ring-fence. In general, this is the price "delivered on site".

### Index numbers

The index has been compiled for each month from July 1966, and for the financial years from 1966-67. Index numbers for the individual groups and all groups for the six State capital cities combined and for all groups combined for each State capital city, are given on pages 234-6. Figures are published to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

The separate city indexes measure price movements in each State capital city individually. They enable comparisons to be drawn between capitals as to differences in degree of price movement from period to period, but not as to differences in price level.

**WHOLESALE PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING—GROUP INDEX NUMBERS—  
WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES, YEARS 1966-67 TO 1969-70 AND  
MONTHS JULY 1966 TO JANUARY 1971**

*(Base of each Index: Year 1966-67=100.0) (a)*

Period	Concrete mix, cement and sand	Cement products	Clay bricks, tiles, etc.	Timber, board and joinery	Steel products	Other metal products	Plumbing fixtures	Electrical instal- lation materials	Installed appli- ances	Plaster and plaster products	Miscel- laneous materials	All groups
1966-67	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1967-68	101.6	102.8	103.6	103.0	101.9	103.9	101.7	103.3	100.0	101.7	102.9	102.7
1968-69	103.8	107.0	107.8	108.6	104.8	106.3	102.0	105.2	99.7	103.0	104.5	106.3
1969-70	107.1	112.6	112.4	113.5	110.0	111.8	108.7	115.8	102.2	105.1	107.4	110.9
1966-67—												
July	99.3	98.1	97.5	98.7	97.8	95.2	99.6	96.0	100.1	99.3	98.3	98.3
August	99.5	98.6	99.5	98.9	98.4	101.2	99.6	100.0	100.1	99.3	98.6	99.2
September	99.1	99.6	99.5	99.2	99.9	98.1	99.6	97.9	100.2	99.4	98.8	99.3
October	99.5	100.0	99.5	99.8	100.2	100.0	99.7	100.3	100.2	99.4	99.3	99.8
November	99.7	100.3	99.9	100.2	100.4	101.2	100.2	102.7	100.2	99.7	100.1	100.2
December	99.6	100.3	99.9	100.3	100.4	101.2	100.2	102.7	100.2	99.7	100.1	100.3
January	99.6	100.4	99.9	100.3	100.4	101.3	100.2	102.7	100.2	99.8	100.2	100.3
February	99.7	100.4	100.0	100.2	100.4	101.3	100.1	102.7	100.2	100.5	100.3	100.3
March	101.0	100.5	100.1	100.2	100.5	101.5	100.1	100.5	99.5	100.5	100.6	100.4
April	101.0	100.5	100.9	100.3	100.5	99.6	100.2	98.3	99.5	100.5	101.1	100.4
May	101.0	100.5	101.7	100.9	100.5	99.7	100.3	98.3	100.0	100.6	101.3	100.8
June	101.0	100.5	101.7	100.9	100.9	99.7	100.5	98.4	100.0	101.3	101.4	100.9
1967-68—												
July	101.0	102.0	101.8	101.1	101.3	99.7	100.5	98.4	100.1	101.3	101.4	101.1
August	101.4	102.0	102.8	101.3	101.6	99.7	100.8	98.4	100.1	101.3	101.4	101.3
September	101.4	102.1	103.0	102.8	101.7	100.3	102.2	98.4	99.7	101.4	101.7	102.0
October	101.4	102.3	103.6	103.0	101.7	100.7	102.0	99.4	99.7	101.4	101.7	102.2
November	101.7	102.3	103.7	103.2	101.8	105.4	102.0	105.0	99.7	101.4	102.5	102.8
December	101.7	102.3	103.8	103.3	101.9	105.4	101.9	105.4	99.7	101.4	103.7	103.0
January	101.7	102.3	103.9	103.2	101.9	105.4	101.9	105.5	99.5	101.5	103.6	102.9
February	101.5	102.5	104.1	103.3	102.2	105.4	101.9	108.6	99.5	102.0	103.7	103.1
March	101.8	102.5	104.1	103.5	101.9	108.1	101.9	108.8	100.6	102.0	103.7	103.4
April	101.9	103.5	104.1	103.8	102.0	108.1	101.9	105.7	100.6	102.0	103.7	103.6
May	101.9	105.0	104.1	103.8	102.5	105.4	101.5	103.8	100.6	102.2	103.8	103.5
June	101.9	105.0	104.6	104.2	102.5	103.3	101.5	101.7	100.0	102.0	103.8	103.5
1968-69—												
July	102.2	105.6	105.1	104.3	102.5	102.8	101.1	101.7	99.9	102.7	104.4	103.7
August	102.4	105.8	105.4	105.8	102.6	103.6	100.9	102.1	99.9	102.7	104.4	104.4
September	102.6	105.8	105.5	105.9	102.9	104.0	100.9	102.1	99.4	102.7	104.4	104.5
October	102.7	105.9	106.4	106.2	103.0	104.5	101.1	102.7	99.4	102.7	104.2	104.7
November	102.7	105.9	107.8	107.7	103.4	104.5	101.1	102.7	99.6	102.7	104.1	105.5
December	104.4	106.8	108.4	108.4	103.7	105.8	101.6	102.7	99.6	102.8	103.9	106.1
January	104.6	106.8	108.5	108.5	104.8	106.0	101.8	105.5	99.6	102.9	103.8	106.3
February	104.7	106.8	108.7	109.4	105.9	107.9	101.7	108.0	99.6	102.9	104.8	107.0
March	103.5	106.9	109.1	109.9	107.1	108.0	103.1	108.0	99.7	102.9	104.9	107.3
April	105.1	107.2	109.4	112.0	107.3	108.6	103.7	108.3	99.7	103.0	104.9	108.3
May	105.1	109.9	109.4	112.4	107.3	109.5	103.7	108.3	99.7	103.9	104.9	108.8
June	105.1	110.8	109.6	112.8	107.2	110.4	103.7	110.2	99.8	104.1	105.0	109.1
1969-70—												
July	105.4	110.9	109.9	112.7	107.4	110.0	105.7	112.2	101.1	104.1	105.4	109.3
August	106.7	111.1	109.9	113.2	107.8	110.5	105.7	112.4	101.2	104.1	105.7	109.7
September	107.3	111.2	110.7	113.2	108.4	111.3	105.5	114.3	101.2	104.1	106.8	110.1
October	107.4	111.6	111.1	113.6	109.1	110.6	107.2	114.3	102.5	104.1	107.2	110.4
November	107.3	111.7	111.3	113.6	109.0	111.2	107.9	113.1	102.7	104.3	107.3	110.5
December	107.3	111.7	111.3	113.4	109.1	111.8	109.0	115.5	102.3	104.3	107.3	110.6
January	108.0	111.7	112.7	113.4	109.5	112.1	109.2	115.5	102.3	104.5	107.6	110.9
February	107.8	113.7	113.6	113.0	110.7	112.3	110.8	115.5	102.7	106.3	107.6	111.3
March	107.3	113.8	114.2	113.7	111.7	112.8	111.0	115.5	102.7	106.3	108.3	111.7
April	106.4	114.7	114.3	114.1	112.1	114.3	111.3	120.9	102.8	106.4	108.5	112.2
May	107.0	114.7	114.6	114.1	112.2	112.5	110.4	120.9	102.8	106.4	108.5	112.1
June	107.4	114.8	115.0	114.1	112.7	111.8	110.4	119.4	102.5	106.4	108.5	112.1
1970-71—												
July	107.8	114.8	115.4	114.5	113.0	110.6	110.2	119.7	102.5	107.0	108.9	112.3
August	108.5	116.2	115.3	114.5	113.1	110.9	110.4	118.6	102.5	107.0	109.4	112.5
September	109.5	116.9	115.8	114.6	113.4	110.5	110.4	117.0	102.9	107.2	109.6	112.7
October	110.2	117.1	116.0	115.3	113.5	110.5	112.4	114.3	102.9	107.2	109.7	113.1
November	111.4	118.5	116.5	115.9	113.6	111.3	112.5	114.5	103.3	107.3	109.9	113.7
December	111.7	119.4	117.5	116.2	113.7	111.7	112.8	114.5	103.5	109.1	110.1	114.2
January	114.8	124.7	117.6	117.2	113.9	112.5	112.9	114.5	103.9	109.2	110.9	115.3

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

WHOLESALE PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING—ALL GROUPS  
INDEX NUMBERS—SIX STATE CAPITAL CITIES, YEARS 1966-67 TO 1969-70  
AND MONTHS JULY 1966 TO JANUARY 1971

(Base of each Index: Year 1966-67=100.0)(a)

NOTE. The separate city indexes measure price movements within each city individually. They do not compare price levels as between cities.

Period	State capital cities						Weighted average of six State capital cities
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	
1966-67 . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1967-68 . . .	103.4	101.3	103.4	102.1	104.0	101.8	102.7
1968-69 . . .	109.3	103.6	105.6	107.0	105.9	104.1	106.3
1969-70 . . .	115.2	107.2	109.4	112.4	110.3	107.7	110.9
1966-67—							
July . . .	97.9	98.8	98.0	99.1	97.9	98.0	98.3
August . . .	99.0	99.4	99.0	99.8	99.3	98.6	99.2
September . . .	99.0	99.7	99.0	99.3	99.0	99.6	99.3
October . . .	99.7	100.2	99.3	99.5	99.6	99.8	99.8
November . . .	100.2	100.5	100.2	99.9	100.0	100.5	100.2
December . . .	100.2	100.5	100.1	100.3	100.0	100.6	100.3
January . . .	100.2	100.5	100.2	100.3	100.0	100.6	100.3
February . . .	100.4	100.4	100.4	100.3	99.9	100.6	100.3
March . . .	100.6	100.3	100.4	100.4	100.0	100.5	100.4
April . . .	100.8	100.2	100.5	100.3	99.8	100.4	100.4
May . . .	100.8	99.8	101.6	100.4	102.2	100.5	100.8
June . . .	100.9	99.9	101.7	100.4	102.3	100.5	100.9
1967-68—							
July . . .	100.9	100.3	101.8	100.3	102.6	100.8	101.1
August . . .	101.2	100.4	102.6	100.9	102.8	100.8	101.3
September . . .	103.0	100.5	102.8	101.0	103.0	100.9	102.0
October . . .	103.2	100.7	103.1	101.1	103.4	100.9	102.2
November . . .	103.8	101.2	103.7	101.5	104.1	101.5	102.8
December . . .	103.9	101.3	103.8	102.2	104.3	101.5	103.0
January . . .	103.9	101.3	103.6	102.3	104.3	101.5	102.9
February . . .	103.9	101.5	103.7	102.5	104.6	102.2	103.1
March . . .	104.2	101.8	103.8	103.4	104.9	102.7	103.4
April . . .	104.3	102.2	103.9	103.4	104.9	102.9	103.6
May . . .	104.5	102.0	103.8	103.3	104.7	102.8	103.5
June . . .	104.5	101.8	104.1	103.5	104.4	102.8	103.5
1968-69—							
July . . .	104.6	102.2	104.1	103.8	104.7	103.1	103.7
August . . .	106.2	102.4	104.3	104.1	104.9	103.1	104.4
September . . .	106.4	102.4	104.3	104.2	105.0	103.1	104.5
October . . .	106.4	103.2	104.0	104.6	105.1	103.2	104.7
November . . .	108.3	103.1	105.0	105.5	105.2	103.2	105.5
December . . .	109.2	103.2	105.6	107.1	105.7	104.0	106.1
January . . .	109.3	103.4	105.9	107.4	105.9	104.2	106.3
February . . .	110.4	103.9	106.1	108.1	106.6	104.6	107.0
March . . .	111.0	104.0	105.7	109.2	106.6	104.9	107.3
April . . .	113.2	104.4	106.9	109.3	106.8	105.0	108.3
May . . .	113.3	105.3	107.3	110.3	107.0	105.1	108.8
June . . .	113.6	105.7	107.5	110.3	107.8	105.5	109.1
1969-70—							
July . . .	113.5	105.9	108.0	110.8	108.3	105.8	109.3
August . . .	113.7	106.5	108.0	110.9	108.8	106.1	109.7
September . . .	113.7	106.8	108.1	111.8	109.8	106.2	110.1
October . . .	114.5	107.0	108.8	112.0	110.0	106.9	110.4
November . . .	114.6	107.1	108.7	112.1	110.2	107.0	110.5
December . . .	114.6	106.9	109.1	112.3	110.4	107.2	110.6

For footnote see next page.



**WHOLESALE PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING—ALL GROUPS  
INDEX NUMBERS—SIX STATE CAPITAL CITIES, YEARS 1966-67 TO 1969-70 AND  
MONTHS JULY 1966 TO JANUARY 1971—continued**

Period	State capital cities						Weighted average of six State capital cities
	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	
1969-70—							
January . . .	115.2	107.1	109.3	112.3	110.4	107.8	110.9
February . . .	115.7	107.5	109.9	112.6	110.4	108.0	111.3
March . . .	116.4	107.5	110.6	113.8	110.8	108.1	111.7
April . . .	116.9	107.9	110.8	114.1	111.3	109.1	112.2
May . . .	117.0	107.9	110.6	113.0	111.6	109.3	112.1
June . . .	116.9	107.9	110.7	113.6	111.0	110.5	112.1
1970-71—							
July . . .	117.2	108.2	111.2	113.2	111.0	110.9	112.3
August . . .	117.4	108.4	111.7	113.3	111.1	111.0	112.5
September . . .	117.4	108.8	112.1	114.2	111.0	111.1	112.7
October . . .	117.6	109.5	112.6	114.5	111.2	111.3	113.1
November . . .	118.0	110.2	112.9	115.4	111.7	112.9	113.7
December . . .	118.3	110.5	113.0	115.5	113.4	113.1	114.2
January . . .	119.5	112.1	113.6	115.7	114.8	113.4	115.3

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off index numbers to the nearest whole number.

**WHOLESALE PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING  
COMPOSITION AND WEIGHTING PATTERN AS AT REFERENCE BASE  
YEAR: 1966-67  
Six State Capital Cities**

Group and Item	Percentage contribution of:	
	Item to group index	Group to All groups index
1. Concrete mix, cement and sand—		5.73
Concrete, ready-mixed . . . . .	66.63	
Cement . . . . .	18.19	
Sand . . . . .	15.18	
2. Cement products—		8.10
Asbestos cement sheets . . . . .	20.22	
Concrete tiles . . . . .	55.09	
Concrete masonry blocks . . . . .	5.63	
Other cement products . . . . .	19.06	
3. Clay bricks, tiles, etc.—		12.85
Clay bricks . . . . .	76.43	
Terracotta tiles . . . . .	7.52	
Earthenware pipes and fittings . . . . .	16.05	
4. Timber, board and joinery—		36.16
Hardwood . . . . .	38.42	
Softwood . . . . .	25.86	
Plywood and board . . . . .	0.96	
Doors and frames . . . . .	8.85	
Windows and frames . . . . .	10.17	
Cupboards, etc. . . . .	15.74	
5. Steel products—		5.86
Steel beams, sections and angles . . . . .	15.38	
Reinforcing steel . . . . .	13.98	
Steel balustrading . . . . .	7.41	
Galvanised steel sheet, decking, etc. . . . .	14.66	
Galvanised steel downpipe and guttering . . . . .	18.86	
Galvanised steel pipes and fittings . . . . .	13.29	
Hinges, catches, handles, etc. . . . .	6.37	
Nails, screws, etc. . . . .	10.05	

WHOLESALE PRICE INDEX OF MATERIALS USED IN HOUSE BUILDING  
COMPOSITION AND WEIGHTING PATTERN AS AT REFERENCE BASE  
YEAR: 1966-67 SIX STATE CAPITAL CITIES—*continued*

Group and Item	Percentage contribution of:	
	Item to group index	Group to All groups index
6. <i>Other metal products—</i>		7.29
Aluminium windows, doors, etc. . . . .	42.79	
Copper pipes and fittings . . . . .	28.74	
Taps and valves . . . . .	17.10	
Latchsets and locksets . . . . .	11.37	
7. <i>Plumbing fixtures, etc.—</i>		3.74
Toilet suites . . . . .	23.16	
Hand basins . . . . .	10.49	
Sinks . . . . .	14.50	
Wash troughs . . . . .	15.98	
Baths . . . . .	23.82	
Shower screens . . . . .	12.05	
8. <i>Electrical installation materials</i>		1.63
Cable . . . . .	56.20	
Switches, switch plugs and lampholders . . . . .	30.90	
Switchboards . . . . .	12.90	
9. <i>Installed appliances—</i>		5.13
Stoves . . . . .	51.07	
Hot water services . . . . .	29.63	
Heating systems . . . . .	19.30	
10. <i>Plaster and plaster products—</i>		5.64
Fibrous plaster sheet and products . . . . .	16.36	
Plaster board . . . . .	79.34	
Hard plaster . . . . .	4.30	
11. <i>Miscellaneous materials—</i>		7.96
Paint . . . . .	30.80	
Glass . . . . .	20.18	
Ceramic wall tiles . . . . .	20.20	
Ceramic and vinyl floor tiles . . . . .	11.14	
Plastic pipes and fittings . . . . .	4.40	
Adhesives . . . . .	2.07	
Insulation and building paper . . . . .	7.47	
Silica-lime bricks . . . . .	1.07	
Building stone . . . . .	2.67	

### Wholesale Price Index of Electrical Installation Materials

This special purpose index was introduced in 1964, and index numbers were published at quarterly intervals from August 1959 to February 1969, when monthly publication commenced. In addition to its use in connection with the Bureau's constant price estimates in the national accounting field, the index has a direct value as a measure of changes in aggregate cost of materials used in an important part of the building industry (other than house building).

#### Commodities and grouping

The items in this index have been selected as representative of materials used in electrical installation in structures such as hospitals, schools, factories and multi-storeyed commercial buildings and flats. These items are divided into three main groups for which separate indexes are compiled in addition to the All Groups index. The combination of materials selected is fixed as to quantity and quality.

#### Price quotations

The items are priced as at the middle of the month for which index numbers are published. The basis of pricing is the price to electrical contractors, delivered on site or into store, metropolitan area, Sydney and Melbourne. The price series used relate to specific standards for each item and in some cases are combinations of prices for different makes, types, etc. The units of quantity specified as the basis for collecting prices are representative lots normally purchased by electrical contractors, inclusive of quantity discounts and packing and quantity extras, etc.

### Method of construction

The index is a fixed-weights index with the reference base: year 1959-60 = 100. In general, the weights were derived from information relating to the values of materials used in selected representative projects in Sydney and Melbourne during the three years 1960-61 to 1962-63. The projects selected for this purpose had a minimum electrical materials and labour content of \$10,000. Selected representative items carry the weights of similar items not directly priced. The index is calculated by the method known as 'the weighted arithmetic mean of price relatives'. For each period, base period percentage value weights are applied to indexes of price movement relative to 1959-60.

### Index numbers

Index numbers for each group of items and for all groups combined for the index of wholesale prices of electrical installation materials are given in the following table. Current index numbers are published monthly in the mimeographed statement *Wholesale Price Indexes—Price Index of Electrical Installation Materials* (Reference No. 9.5).

#### WHOLESALE PRICE INDEX OF ELECTRICAL INSTALLATION MATERIALS GROUP INDEX NUMBERS, YEARS 1959-60 TO 1969-70 AND MONTHS JULY 1970 TO JANUARY 1971

(Base of each index: year 1959-60 = 100.0) (a)

Period	Conductors	Conduit and accessories	Switch-board and switch-gear material	All groups
Year—				
1959-60 . . . . .	100.0	100.0	100.0	100.0
1966-67 . . . . .	120.2	105.8	109.2	112.8
1967-68 . . . . .	119.9	106.0	112.5	113.8
1968-69 . . . . .	119.5	107.3	115.3	115.0
1969-70 . . . . .	142.1	109.6	120.1	126.2
1970-71—July . . . . .	140.7	111.4	125.0	127.8
August . . . . .	137.7	111.6	126.0	127.1
September . . . . .	133.3	111.6	126.1	125.4
October . . . . .	128.6	111.6	126.4	123.6
November . . . . .	127.9	110.8	126.8	123.3
December . . . . .	127.2	110.8	127.0	123.1
January . . . . .	127.3	111.1	127.7	123.4

(a) Figures are shown to one decimal place to avoid distortions that would occur in rounding off the index numbers to the nearest whole number.

### EXPORT PRICE INDEXES

An annual index of export prices has been published by the Bureau since its inception. Brief descriptions of indexes issued between 1901 and 1962 (that is, prior to the introduction of the current Export Price Index) are shown in Year Book No. 55, 1969, pages 256-7.

### The current Export Price Index

The current Export Price Index was first published in October 1962, but index numbers were compiled back to July 1959. The reference base of this index is: year 1959-60 = 100. Index numbers from July 1969 have been compiled on an interim basis which incorporates a re-weighting of the items contained in the original index, and the inclusion of some additional items. This interim basis was introduced pending completion of a comprehensive review and re-basing of the index as a whole.

The Export Price Index is a fixed-weights index, and its purpose (as was that of the previous fixed-weights index) is to provide comparisons monthly, over a limited number of years, of the level of export prices of the selected items, making no allowance for variations in quantities exported. The index numbers are thus measures of price change only. The price series used in the index relate to specified standards for each commodity and in most cases are combinations of prices for a number



of representative grades, types, etc. For some commodities price movements in the predominant market, or markets, are used, while for other commodities average realisations in all export markets are used. As nearly as possible, prices used are on the basis f.o.b. at the main Australian ports of export. The index is calculated by the method known as 'the weighted arithmetic mean of price relatives'.

### Composition and weighting

Over the period of ten years between July 1959 and June 1969, there were twenty-nine items in the export price index, and the weights used to combine these were based on average annual values of exports during the years 1956-57 to 1960-61. The twenty-nine items constituted in excess of 80 per cent of the total value of Australian exports in the earlier part of the ten years mentioned; this percentage, however, decreased markedly in more recent years. A review of the content and weighting pattern of the index was consequently undertaken, and an interim series incorporating some of the results of this review was introduced with effect from July 1969.

### Interim basis

The interim series is a fixed-weights export price index, compiled monthly as from June 1969, which has been linked at June 1969 to the current index in its original form. The weights of the items in the interim series are derived from the values of exports for the year 1969-70, and the group weights have been adjusted to reflect the proportion that the value of wool bore to the value of all exports in that year. In addition to the twenty-nine items of the current index as first introduced, the interim series includes the four items: iron ore, bauxite, alumina and mineral sands. These items are not attached to any of the original single groups of the index but are incorporated in the 'All groups' index number from June 1969. The thirty-three items contained in the interim series constituted 74 per cent of the total value of Australian exports (merchandise and non-merchandise) in 1969-70.

### Index numbers

Index numbers for each of the groups and 'All groups' are shown in the following table. The yearly index numbers are simple averages of the twelve monthly index numbers in each year.

#### EXPORT PRICE INDEX NUMBERS, YEARS 1959-60 TO 1969-70 AND MONTHS JULY 1970 TO JANUARY 1971

(Base of each index: year 1959-60 = 100)

Period	Wool	Meats	Dairy produce	Cereals	Dried and canned fruits	Sugar	Hides and tallow	Metals and coal (a)	Gold	All groups
1959-60.	100	100	100	100	100	100	100	100	100	100
1961-62.	97	100	81	106	95	91	84	91	100	96
1962-63.	104	101	88	107	90	107	72	89	100	101
1963-64.	120	105	93	107	98	175	73	101	100	114
1964-65.	102	110	94	107	100	100	91	123	101	105
1965-66.	107	120	86	107	102	84	107	122	101	107
1966-67.	103	124	84	114	101	67	89	117	101	105
1967-68.	95	125	79	109	95	67	67	120	104	100
1968-69.	99	131	72	104	97	72	73	123	117	102
1969-70(b)	87	148	73	96	99	93	94	143	109	(c)103
1970-71—	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)	(b)(c)
July .	79	151	78	93	101	92	95	146	102	101
August .	75	149	79	94	101	106	95	141	102	101
September .	71	144	81	95	100	115	97	141	104	100
October .	63	149	83	96	100	113	99	140	106	98
November .	68	147	86	97	100	113	98	138	108	100
December .	65	146	87	97	100	102	97	138	108	98
January .	64	150	87	105	100	101	93	137	109	100

(a) Comprises coal, iron and steel, copper, zinc, lead and silver. Does not include iron ore, bauxite, alumina and mineral sands, which, however, have been included in the 'All groups' index from July 1969. (b) Interim series linked as at June 1969. (c) Interim series includes, in addition to the specified groups the 4 items: iron ore, bauxite, alumina and mineral sands.

**Link between current and previous indexes**

In order to show approximate movements in export prices over a long period, the 'All groups' indexes of the successive series have been linked together at the earliest year for which each of the indexes was compiled. The table below shows this linked series and a long-term price index for wool, which is the most important single component in the movement of the 'All groups' index.

**EXPORT PRICE INDEX NUMBERS—LINKED SERIES 1936-37 TO 1969-70**

(Base of each index: year 1959-60 = 100)

<i>Period</i>	<i>Wool</i>	<i>All groups</i>	<i>Period</i>	<i>Wool</i>	<i>All groups</i>
1936-37 . . .	29	30	1953-54 . . .	145	125
1937-38 . . .	23	27	1954-55 . . .	127	114
1938-39 . . .	19	22	1955-56 . . .	109	105
1939-40 . . .	23	26	1956-57 . . .	136	117
1940-41 . . .	24	28	1957-58 . . .	111	102
1941-42 . . .	24	28	1958-59 . . .	85	90
1942-43 . . .	28	30	1959-60 . . .	100	100
1943-44 . . .	28	31	1960-61 . . .	92	95
1944-45 . . .	28	34	1961-62 . . .	97	96
1945-46 . . .	28	39	1962-63 . . .	104	101
1946-47 . . .	41	54	1963-64 . . .	120	114
1947-48 . . .	68	75	1964-65 . . .	102	105
1948-49 . . .	86	88	1965-66 . . .	107	107
1949-50 . . .	111	101	1966-67 . . .	103	105
1950-51 . . .	235	173	1967-68 . . .	95	100
1951-52 . . .	133	125	1968-69 . . .	99	102
1952-53 . . .	145	128	1969-70(a) . . .	87	103

(a) Interim series linked as at June 1969.

**WAGES, EARNINGS AND HOURS****Arbitration and Wages Boards Acts and associated legislation**

Particulars regarding the operation of Commonwealth and State Laws for the regulation of wages, hours and other conditions of employment were first compiled for the year 1913, and revised particulars have appeared annually in the *Labour Report*. A summary of the Commonwealth legislation and brief particulars of Commonwealth and State industrial tribunals are given in the following paragraphs.

**Commonwealth industrial legislation and tribunals**

Under placitum (xxxv) of section 51 of the Commonwealth of Australia Constitution, the Commonwealth Parliament is empowered to make laws with respect to 'conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State'. The Parliament has made such a law, namely the *Conciliation and Arbitration Act 1904-1970*.

This Act defines an 'industrial dispute' as:

'(a) A dispute (including a threatened, impending or probable dispute) as to industrial matters which extends beyond the limits of any State; and (b) a situation which is likely to give rise to a dispute as to industrial matters which so extends; and includes—(c) such a dispute in relation to employment in an industry carried on by, or under the control of, a State or an authority of a State; (d) a dispute in relation to employment in an industry carried on by, or under the control of, the Commonwealth or an authority of the Commonwealth, whether or not the dispute extends beyond the limits of any one State; and (e) a claim which an organization is entitled to submit to the Commission under section eleven A of the *Public Service Arbitration Act 1920-1969* or an application or matter which the Public Service Arbitrator has refrained from hearing, or from further hearing, or from determining under section fourteen A of that Act, whether or not there exists in relation to the claim, application or matter a dispute as to industrial matters which extends beyond the limits of any one State.'

The Conciliation and Arbitration Act was extensively amended by an Act (No. 44 of 1956) assented to on 30 June 1956. This amendment altered the structure of the arbitration machinery by separating the judicial functions from the conciliation and arbitration functions. The Commonwealth Industrial Court was established to deal with judicial matters under the Act, and the Commonwealth Conciliation and Arbitration Commission to handle the functions of conciliation and arbitration. A summary of the provisions of the *Conciliation and Arbitration Act* 1904–1970 is given in the following paragraphs.

The Commonwealth Industrial Court is at present composed of a Chief Judge and seven other Judges. The jurisdiction of the Court shall be exercised by not less than two Judges, except in the following circumstances. A single Judge may exercise the jurisdiction of the Court with respect to the dismissal or injury of an employee on account of industrial action, interpretation of awards, questions concerning eligibility of membership of an organisation, disputes between an organisation and its members, and a prescribed matter of practice or procedure. A single Judge may refer a question of law for the opinion of the Court constituted by not less than two Judges. The Court is a Superior Court of Record with the same power to punish contempts of its power and authority as is possessed by the High Court. In general, decisions of the Industrial Court are final; however, an appeal lies to the High Court, but only when the latter grants leave to appeal. The Act provides for the registration of associations of employees and employers, and for inquiries to be held concerning disputed elections in organisations; and certain powers in connection therewith are, by the Act, given to the Industrial Court. Provision is also made for the Commission to exercise the powers of the Court with regard to an application for cancellation of registration of an organisation. Any such change of jurisdiction must be notified by proclamation. This provision could be used if the powers of the Court in this regard were declared, in whole or in part, to be invalid.

Special provision is made concerning the right of audience before the Commonwealth Industrial Court. Briefly, except in proceedings which, in general, involve questions of law or offences against the Act, parties are able to elect whether to appear personally or to be represented by lawyers or officials. Even in proceedings involving questions of law, except appeals from decisions by other Courts to the Industrial Court, on matters arising under this Act or the *Public Service Arbitration Act* 1920–1969, the parties may, if they wish and the Court grants leave, be represented by officials.

The Commonwealth Conciliation and Arbitration Commission at the end of 1970 was composed of a President, six Deputy Presidents, a Senior Commissioner, fourteen Commissioners and three Conciliators. The Commission is empowered to prevent or settle industrial disputes by conciliation or arbitration, and to make suggestions and to do such things as appear right and proper for (a) effecting a reconciliation between parties to industrial disputes; (b) preventing and settling industrial disputes by amicable agreement; and (c) preventing and settling, by conciliation or arbitration, industrial disputes not prevented or settled by amicable agreement. The Commission may exercise its powers of its own motion or on the application of a party.

The President may assign a Commissioner to deal with industrial disputes relating to particular industries, or members of the Commission to deal with a particular industrial dispute. However subject to the approval of the President, it is the duty of the Senior Commissioner to organise and allocate the work of the Commissioners and Conciliators. When an industrial dispute occurs or is likely to occur, a Commissioner shall take steps for the prompt prevention or settlement of that dispute by conciliation or, if in his opinion conciliation is unlikely to succeed or has failed, by arbitration. A Commissioner may arrange with the Senior Commissioner for a Conciliator to assist the parties to reach an amicable agreement and shall do so if the parties so request. If an agreement is reached, a memorandum of its terms shall be made in writing, and may be certified by the Commission. A certified memorandum shall have the same effect as an award.

Only the Commission in Presidential Session, that is, the Commission constituted by at least three presidential members nominated by the President, has the power to make awards, or to certify agreements, concerning standard hours, basic wages and long-service leave. Upon application by a party to an industrial dispute, a Commissioner shall consult with the President as to whether in the public interest any matter in dispute should be dealt with by a Commission constituted by not less than three members nominated by the President, at least one of whom shall be a presidential member and one, where practicable, the Commissioner concerned. The President may direct the Commission to hear the matter in dispute; however, after consideration, the Commission may refer the matter in dispute back for determination to the Commissioner originally dealing with the dispute.

An appeal against the decision of a Commissioner shall be heard by not less than three members nominated by the President, of whom at least two shall be presidential members of the Commission. However, an appeal will not be heard unless the Commission considers it is necessary as a matter of



public interest. The President, after taking account of the views of the parties to a dispute, may appoint a member of the Commission to take evidence on behalf of a presidential bench of the Commission, so that it may have this evidence before it when it commences its hearing.

Full benches of the Commission not constituted by the same persons may sit in joint session at the direction of the President when he considers it desirable and has the opinion that a question is common to the matters before those benches. A joint session may be held whether the benches concerned are constituted pursuant to the Conciliation and Arbitration Act or the Public Service Arbitration Act, and whether they are constituted to hear references or appeals. However, it is left to each appropriate full bench to determine any of the matters before it.

Provision is also made in the Act for a presidential member of the Commission to handle industrial matters in connection with the maritime industries, the Snowy Mountains Area and the stevedoring industry, except in those matters for which the Act requires that the Commission shall be constituted by more than one member. The Commonwealth Conciliation and Arbitration Commission also deals with disputes and industrial matters, interstate or intra-state, associated with undertakings or projects of the Commonwealth Government which have been declared by the Minister to be Commonwealth projects for the purposes of this Act. In effect, this places employees of Commonwealth projects, so declared, under the jurisdiction of the Commission. The Minister has the power to exempt certain persons or classes of persons working on these projects from the jurisdiction of the Commission.

The Commission may make an award in relation to an industrial dispute concerning employees of a Commonwealth project or when the Public Service Arbitrator refrains from dealing with claims made by a Public Service employee organisation or consents to the claims being presented to the Commission, though such an award may be inconsistent with a law of the Commonwealth relating to salaries, wages, rates of pay or terms or conditions of service of employees in the Public Service as defined by section three of the *Public Service Arbitration Act 1920-1969*, not being the *Commonwealth Employees' Compensation Act 1930-1970*, the *Commonwealth Employees' Furlough Act 1943-1968*, the *Superannuation Act 1922-1969* or any other prescribed Act.

An amendment of the Conciliation and Arbitration Act operative from November 1967 provided for the appointment of a person to be the Flight Crew Officers Industrial Tribunal empowered to prevent or settle industrial disputes relating to pilots, navigators, or flight engineers of aircraft.

The Conciliation and Arbitration Act provides that where a State law, or an order, award, decision or determination of a State industrial authority is inconsistent with or deals with a matter dealt within an award of the Commission, the latter shall prevail, and the former, to the extent of the inconsistency or in relation to the matter dealt with, shall be invalid.

For further particulars regarding Commonwealth arbitration legislation, see the annual *Labour Report*. For information concerning the Australian Stevedoring Industry Authority and the Coal Industry Tribunal see the Transport and Communication chapter and the Mineral Industry chapter respectively of this Year Book, and for further information on the Commonwealth Public Service Arbitrator see the *Labour Report*.

## State industrial tribunals

### New South Wales

The controlling authority is the Industrial Commission of New South Wales, consisting of a President and seven other Judges. Subsidiary tribunals are the Conciliation Commissioners, the Apprenticeship Commissioner, Conciliation Committees, and Apprenticeship Councils constituted for particular industries. Each Conciliation Committee consists of a Conciliation Commissioner as Chairman and equal numbers of representatives of employers and employees. The Apprenticeship Commissioner and the members of the Conciliation Committee for an industry constitute the Apprenticeship Council for the industry. These subsidiary tribunals may make awards binding on industries, but an appeal to the Industrial Commission may be made against any award. Special Commissioners with conciliatory powers and limited arbitration powers may be appointed. Compulsory control commenced in 1901, after the earlier Acts of 1892 and 1899 providing for voluntary submission of matters in dispute had proved abortive.

### Victoria

The authorities are separate Wages Boards for the occupations and industries covered, each consisting of a chairman and equal numbers of representatives of employers and employees, and a Court of Industrial Appeals, the latter presided over by a Judge of the County Court. The system was instituted in the State in 1896, and represented the first example in Australia of legal regulation of wage rates.

### Queensland

Legal control was first instituted in 1908 with the passing of the Wages Boards Act. 'The Industrial Conciliation and Arbitration Act of 1961' established the Industrial Conciliation and Arbitration Commission and preserved and continued in existence the Industrial Court. The Industrial Court is constituted by the President (a Judge of the Supreme Court of Queensland) sitting alone, and the Full Industrial Court by the President and two Commissioners. The Conciliation and Arbitration Commission is constituted by a Commissioner sitting alone; and the Full Bench of the Commission by at least three Commissioners. Not more than five Commissioners shall be appointed. A Commissioner shall not be capable of being a member of the Executive Council or of the Legislative Assembly, and shall not take part in the management of any business.

### South Australia

In South Australia from July 1966 the system of control consists of an Industrial Commission, an Industrial Court, and Conciliation Committees. The Industrial Commission is composed of a President, Deputy President, and two Commissioners and has power to make awards. The President of the Commission is also Judge of the Industrial Court which deals with legal matters. The two Commissioners are chairmen of each of the Conciliation Committees consisting of an equal number of representatives of employers and employees. These committees issue awards. Where complete agreement cannot be reached in these committees the chairman sits as a Commissioner to determine the unresolved matters. Provision is made for references and appeals to the full Commission.

### Western Australia

Legal control dates back to 1900. The present system of control comprises a four-man Western Australian Industrial Commission and an Industrial Appeal Court consisting of three Supreme Court Judges who are nominated by the Chief Justice of Western Australia. A Commissioner may, in relation to any dispute or other matter, refer such matters to the Commission in Court Session. Similarly, appeals from decisions of a single Commissioner are heard by the other three Commissioners acting as the Commission in Court Session, but such hearings are restricted to the evidence and matters raised in the proceedings before the single Commissioner. Up to December 1966 the Commission in Court Session fixed and adjusted the basic wage. In December 1966 legislation provided that the Western Australian basic wage rates should be the same as the Commonwealth Six Capitals rates as soon as these exceeded the State rates. However Commonwealth basic wages were eliminated from Commonwealth awards in July 1967. Western Australian Legislation operative from 22 November 1968 fixed the State basic wages for adult males and adult females and provided for the Commission to review the basic wage at least every twelve months (for further details see page 264). Appeals from the Commission to the Industrial Appeal Court are limited to matters which are erroneous in law or in excess of jurisdiction. The Court has the power to impose penalties for disobedience of orders made by the Commission.

The Western Australian Coal Industry Tribunal, established under the *Mining Act*, 1904-1969, has power to determine any industrial matter in the coal mining industry. It consists of a chairman and four other members (two representatives each of employers and employees). Boards of reference may be appointed by the Tribunal, and decisions of the Tribunal may be reviewed by the Court of Arbitration on the application of a party subject to the decision.

### Tasmania

The authority consists of Wages Boards for separate industries, comprising a Chairman (who is common to all Wages Boards) appointed by the Governor, and equal numbers of representatives of employers and employees appointed by the Minister administering the Act. The system was instituted in 1910.

## Incidence of industrial awards, determinations and collective agreements

In May 1968 a survey ascertained the approximate proportions of employees whose wages, salaries and conditions of work were normally varied in accordance with variations in awards, determinations and registered collective agreements of Commonwealth and State industrial authorities. The scope, results, etc. of this survey were published in June 1969 in a statistical bulletin *Survey of the Incidence of Industrial Awards, Determinations and Collective Agreements*, May 1968 (Reference No. 6.5) and in September 1970 in statistical bulletin *Survey of the Incidence of Industrial Awards, Determinations and Collective Agreements*, May 1968 (*Bulletin No. 2*) (Reference No. 6.25).

### Rates of wage and hours of work

This section contains indexes (with base: year 1954 = 100) of minimum weekly and hourly rates of wage and standard hours of work for adult males and adult females for Australia and each State. In the indexes there are fifteen industry groups for adult males and eight industry groups for adult females. For relevant periods these indexes replace cognate indexes (base: year 1911 = 1,000 for males and April 1914 = 1,000 for females) published in Year Books before No. 46, 1960. The current indexes are based on the occupation structure existing in 1954. Weights for each industry and each occupation were derived from two sample surveys made in that year. The first was the Survey of Awards in April 1954 which showed the number of employees covered by individual awards, determinations and agreements. This provided employee weights for each industry as well as a basis for the Survey of Award Occupations made in November 1954. This second survey showed the number of employees in each occupation within selected awards, etc. thereby providing occupation weights.

The industrial classification used in the current indexes, shown in the table on page 245, does not differ basically from the previous classification, the alterations being largely in the arrangement of classes. The former Pastoral, agricultural, etc. group and the domestic part of the Amusement, hotels, personal service, etc. group are excluded from the current indexes because of coverage difficulties.

The minimum wage rates and standard hours of work used in the current indexes are for representative occupations within each industry. They have been derived entirely from representative awards, determinations and agreements in force at the end of each month or quarter, commencing with March 1939 for adult males and March 1951 for adult females. Particulars have been available as at the end of each month for adult males from January 1957 and for adult females from July 1967. The index for adult males includes rates and hours for 3,415 award designations. However, as some of these designations are operative within more than one industry, or in more than one State, the total number of individual award occupations is 2,313. For adult females the corresponding numbers are 1,100 and 515. Using the industry and occupation weights derived from the surveys described above, these rates and hours were combined to give weighted averages for each industry group for each State and Australia.

Because the indexes are designed to measure movements in prescribed minimum rates of 'wages' as distinct from 'salaries', those awards, etc. which relate solely or mainly to salary earners are excluded.

A more detailed description of the current indexes of minimum rates of wage and standard hours of work is given in the *Labour Report*, which also contains an extensive tabular presentation of the minimum rates of pay for adult males and females in the principal occupations in the capital city of each State. Further particulars of wage rates and index numbers will be found in mimeographed bulletins *Minimum Wage Rates, March 1939 to June 1965* and *Wage Rates Indexes, June 1965 to June 1968*. Current figures are published in the monthly bulletin *Wage Rates and Earnings* (Reference No. 6.16).

#### Weekly wage rates—adult males

The following table shows, for each State and Australia, the weighted average minimum weekly rates of wage payable to adult male workers for a full week's work and index numbers at the dates specified.

**WEEKLY WAGE RATES: ADULT MALES, ALL GROUPS(a), STATES, DECEMBER 1950 TO 1970**  
WEIGHTED AVERAGE MINIMUM WEEKLY RATES(b) PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

End of December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
RATES OF WAGE(c)							
(\$)							
1950 . . . . .	20.62	20.18	19.52	19.79	20.06	19.80	20.20
1960 . . . . .	36.28	34.99	35.07	34.22	35.81	35.15	35.50
1968 . . . . .	49.46	48.86	49.01	48.23	47.72	48.98	48.98
1969 . . . . .	52.38	51.73	51.91	50.69	50.69	52.00	51.85
1970 . . . . .	54.01	53.36	54.93	51.73	55.73	53.96	53.86
INDEX NUMBERS							
(Base: Weighted Average Weekly Wage Rates for Australia, 1954 = 100)							
1950 . . . . .	73.0	71.4	69.1	70.1	71.0	70.1	71.5
1960 . . . . .	128.5	123.9	124.2	121.2	126.8	124.5	125.7
1968 . . . . .	175.1	173.0	173.5	170.8	169.0	173.4	173.4
1969 . . . . .	185.5	183.2	183.8	179.5	179.5	184.1	183.6
1970 . . . . .	191.2	188.9	194.5	183.2	197.3	191.1	190.7

(a) Excludes rural. (b) As prescribed in awards, determinations and agreements. (c) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.



The following table shows for Australia the weighted average minimum weekly rates of wage and index numbers in each industry group and for all groups (excluding rural) at the dates specified.

**WEEKLY WAGE RATES: ADULT MALES, INDUSTRY GROUPS, AUSTRALIA  
DECEMBER 1950 TO 1970**

WEIGHTED AVERAGE MINIMUM WEEKLY RATES<sup>(a)</sup> PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

Industry group	End of December—				
	1950	1960	1968	1969	1970
RATES OF WAGE <sup>(b)</sup> (\$)					
Mining and quarrying . . . . .	25.96	41.47	56.79	59.01	60.37
Manufacturing—					
Engineering, metals, vehicles, etc. . . . .	20.17	35.02	48.74	50.86	51.45
Textiles, clothing and footwear . . . . .	19.74	34.04	45.14	48.18	50.91
Food, drink and tobacco . . . . .	20.14	35.22	47.22	50.34	52.77
Sawmilling, furniture, etc. . . . .	19.60	34.62	46.81	49.93	51.84
Paper, printing, etc. . . . .	21.42	37.92	53.13	55.81	56.71
Other manufacturing . . . . .	19.76	34.72	47.61	50.08	52.08
<i>All manufacturing groups</i> . . . . .	20.08	35.05	48.14	50.65	52.04
Building and construction . . . . .	19.86	35.75	50.61	53.14	56.63
Railway services . . . . .	19.58	34.65	46.42	49.65	51.30
Road and air transport . . . . .	19.79	35.25	47.90	51.34	53.27
Shipping and stevedoring <sup>(c)</sup> . . . . .	19.66	34.46	51.23	55.75	60.19
Communication . . . . .	21.33	38.49	58.77	64.42	67.29
Wholesale and retail trade . . . . .	20.08	35.71	47.99	51.00	53.63
Public authority (n.e.i.) and community and business services . . . . .	19.21	34.81	47.86	52.57	53.98
Amusement, hotels, personal service, etc. . . . .	19.23	33.73	44.64	47.23	48.93
<i>All industry groups<sup>(d)</sup></i> . . . . .	20.20	35.50	48.98	51.85	53.86

**INDEX NUMBERS**

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

Mining and quarrying . . . . .	91.9	146.8	201.1	208.9	213.8
Manufacturing—					
Engineering, metals, vehicles, etc. . . . .	71.4	124.0	172.6	180.1	182.2
Textiles, clothing and footwear . . . . .	69.9	120.5	159.8	170.6	180.3
Food, drink and tobacco . . . . .	71.3	124.7	167.2	178.2	186.8
Sawmilling, furniture, etc. . . . .	69.4	122.6	165.7	176.8	183.6
Paper, printing, etc. . . . .	75.9	134.3	188.1	197.6	200.8
Other manufacturing . . . . .	70.0	122.9	168.6	177.3	184.4
<i>All manufacturing groups</i> . . . . .	71.1	124.1	170.5	179.3	184.3
Building and construction . . . . .	70.3	126.6	179.2	188.1	200.5
Railway services . . . . .	69.3	122.7	164.4	175.8	181.6
Road and air transport . . . . .	70.1	124.8	169.6	181.8	188.6
Shipping and stevedoring <sup>(c)</sup> . . . . .	69.6	122.0	181.4	197.4	213.1
Communication . . . . .	75.5	136.3	208.1	228.1	238.3
Wholesale and retail trade . . . . .	71.1	126.4	169.9	180.6	189.9
Public authority (n.e.i.) and community and business services . . . . .	68.0	123.2	169.5	186.1	191.1
Amusement, hotels, personal service, etc. . . . .	68.1	119.4	158.1	167.2	173.2
<i>All industry groups<sup>(d)</sup></i> . . . . .	71.5	125.7	173.4	183.6	190.7

(a) As prescribed in awards, determinations and agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. (c) Includes the value of keep where supplied. (d) Excludes rural.

*Adult males—components of total wage rate.* A dissection of weighted average minimum weekly wage rates for adult males into three components of the total wage, i.e. basic wage, margin, and loading, with separate particulars for employees covered by awards etc. within Commonwealth and State jurisdictions, has been calculated for months to June 1967 and published in the mimeographed bulletins *Minimum Wage Rates, March 1939 to June 1965* and *Wage Rates Indexes, June 1965 to June 1968*.

*Adult males—jurisdiction.* Weighted average minimum weekly wage rates for adult males covered by *Commonwealth awards etc.* and for those covered by *State awards etc.* (as defined below) are shown separately in the following table. For the purposes of the index, *Commonwealth awards etc.* include awards of, or agreements registered with, the Commonwealth Conciliation and Arbitration Commission, and determinations of the Commonwealth Public Service Arbitrator. *State awards etc.* include awards or determinations of, or agreements registered with, State industrial tribunals, together with certain unregistered agreements when these are dominant in the particular industries to which they refer.

#### WEEKLY WAGE RATES (a): ALL GROUPS—ADULT MALES, DECEMBER 1950 TO 1970

(£)

WEIGHTED AVERAGE MINIMUM WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME)  
AS PRESCRIBED IN AWARDS, DETERMINATIONS AND AGREEMENTS

Jurisdiction	End of December—				
	1950	1960	1968	1969	1970
Commonwealth awards, etc. . . . .	20.18	35.14	49.39	52.08	53.28
State awards, etc. . . . .	20.23	35.88	48.54	51.60	54.49
All awards, etc. . . . .	20.20	35.50	48.98	51.85	53.86

(a) Excludes rural. The amounts should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. For definitions see text above.

#### Weekly wage rates—adult females

The following table shows, for each State and Australia, the weighted average minimum weekly rates of wage payable to adult female workers for a full week's work and index numbers at the dates specified. This series has not been compiled for years prior to 1951.

#### WEEKLY WAGE RATES: ADULT FEMALES, STATES, DECEMBER 1951 TO 1970

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(a) PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

End of December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
RATES OF WAGE(b) (£)							
1951 . . . . .	17.23	17.22	16.12	17.02	16.25	16.56	17.03
1960 . . . . .	26.12	24.66	23.93	24.29	25.12	23.88	25.17
1968 . . . . .	35.53	34.52	34.70	33.60	34.12	33.45	34.85
1969 . . . . .	38.69	37.08	37.64	35.70	36.68	36.94	37.69
1970 . . . . .	40.59	38.64	40.58	37.14	40.00	38.13	39.61

#### INDEX NUMBERS

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

1951 . . . . .	86.6	86.5	81.0	85.5	81.6	83.2	85.6
1960 . . . . .	131.2	123.9	120.2	122.0	126.2	120.0	126.4
1968 . . . . .	178.5	173.4	174.3	168.8	171.4	168.0	175.0
1969 . . . . .	194.4	186.2	189.0	179.3	184.2	185.6	189.3
1970 . . . . .	203.9	194.1	203.8	186.5	200.9	191.5	198.9

(a) As prescribed in awards, determinations and agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

The following table shows for Australia weighted average minimum weekly rates of wage and index numbers in each of the industry groups in which the number of females employed is important, and the weighted average for all groups combined, at the dates specified.

**WEEKLY WAGE RATES: ADULT FEMALES, INDUSTRY GROUPS, AUSTRALIA  
DECEMBER 1951 TO 1970**

WEIGHTED AVERAGE MINIMUM WEEKLY RATES<sup>(a)</sup> PAYABLE FOR A FULL WEEK'S WORK  
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

Industry Group	End of December—				
	1951	1960	1968	1969	1970
<b>RATES OF WAGE<sup>(b)</sup> (\$)</b>					
Manufacturing—					
Engineering, metals, vehicles, etc. . . . .	17.09	24.98	34.15	37.05	40.22
Textiles, clothing and footwear . . . . .	17.12	24.07	32.38	34.77	36.59
Food, drink and tobacco . . . . .	16.58	24.63	33.68	36.10	37.98
Other manufacturing . . . . .	16.88	24.80	33.81	36.67	37.78
<i>All manufacturing groups</i> . . . . .	<i>16.99</i>	<i>24.46</i>	<i>33.17</i>	<i>35.76</i>	<i>37.68</i>
Transport and communication . . . . .	17.75	26.02	37.92	40.87	43.89
Wholesale and retail trade . . . . .	17.11	26.36	36.89	39.84	42.05
Public authority (n.e.i.) and community and business services . . . . .	17.01	25.78	36.57	40.05	41.75
Amusement, hotels, personal service, etc. . . . .	16.68	24.50	34.07	36.71	37.94
<i>All industry groups</i> . . . . .	<i>17.03</i>	<i>25.17</i>	<i>34.85</i>	<i>37.69</i>	<i>39.61</i>

**INDEX NUMBERS**

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

Manufacturing—					
Engineering, metals, vehicles, etc. . . . .	85.9	125.5	171.5	186.1	202.0
Textiles, clothing and footwear . . . . .	86.0	120.9	162.6	174.6	183.8
Food, drink and tobacco . . . . .	83.3	123.7	169.2	181.3	190.8
Other manufacturing . . . . .	84.8	124.6	169.8	184.2	189.7
<i>All manufacturing groups</i> . . . . .	<i>85.4</i>	<i>122.9</i>	<i>166.6</i>	<i>179.6</i>	<i>189.3</i>
Transport and communication . . . . .	89.2	130.7	190.5	205.3	220.5
Wholesale and retail trade . . . . .	85.9	132.4	185.3	200.1	211.2
Public authority (n.e.i.) and community and business services . . . . .	85.4	129.5	183.7	203.2	209.7
Amusement, hotels, personal service, etc. . . . .	83.8	123.1	171.1	184.4	190.6
<i>All industry groups</i> . . . . .	<i>85.6</i>	<i>126.4</i>	<i>175.0</i>	<i>189.3</i>	<i>198.9</i>

(a) As prescribed in awards, determinations and agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

**Standard hours of work**

In the fixation of weekly wage rates most industrial tribunals prescribe the number of hours constituting a full week's work for the wage rates specified. The hours of work so prescribed form the basis of the compilation of the weighted averages and index numbers on page 249. The main features of the reduction of hours to forty-four and later to forty per week are summarised below. Further details will be found in previous issues of the Year Book.



### The 44-hour week

No permanent reduction to a 44-hour week was effected until 1925, although temporary reductions had been achieved earlier. In 1920 the New South Wales legislature granted a 44-hour week to most industries, but in the following year this provision was withdrawn. Also in 1920 the President of the Commonwealth Court of Conciliation and Arbitration (Higgins J.), after inquiry, granted a 44-hour week to the Timber Workers' Union, and in the following year he extended the same privilege to the Amalgamated Society of Engineers. In 1921, however, a reconstituted Commonwealth Court of Conciliation and Arbitration unanimously rejected applications by five trade unions for the shorter standard week and re-introduced the 48-hour week in the case of the above-mentioned two unions then working forty-four hours. During 1924 the Queensland Parliament passed legislation to operate from 1 July 1925 granting the 44-hour standard week to employees whose conditions of work were regulated by awards and agreements of the Queensland State industrial authority. Similar legislative action in New South Wales led to the re-introduction of the 44-hour week in that State as from 4 January 1926.

In 1927 the Commonwealth Court of Conciliation and Arbitration granted a 44-hour week to the Amalgamated Engineering Union and intimated that this reduction in standard hours of work would be extended to industries operating under conditions similar to those in the engineering industry. Applications for the shorter hours by other unions were, however, treated individually, the nature of the industry, the problem of production, the financial status, and the amount of foreign competition being fully investigated. The economic depression delayed the extension of the standard 44-hour week until the subsequent improvement in economic conditions made possible its general extension to employees under Commonwealth awards.

In States other than New South Wales and Queensland the change to the shorter week extended over the years from 1926 to 1941.

### The 40-hour week

The New South Wales Parliament passed legislation granting a 40-hour week, operative from 1 July 1947, to industries and trades regulated by State awards and agreements. In Queensland similar legislation was passed by Parliament providing for the 40-hour week to operate from 1 January 1948.

The Commonwealth Court of Conciliation and Arbitration, in its judgment of 8 September 1947 in the *Standard Hours Inquiry*, 1947 granted the reduction to the 40-hour week from the beginning of the first pay-period commencing in January 1948. On 27 October 1947 the South Australian Industrial Court approved the incorporation of the 40-hour standard week in awards of that State. The Court of Arbitration of Western Australia, on 6 November 1947, approved that provision for a 40-hour week could be incorporated in awards of the Court, commencing from 1 January 1948.

In Victoria and Tasmania the Wages Board met and also incorporated the shorter working week in their determinations, so that from the beginning of 1948 practically all employees in Australia whose conditions of labour were regulated by industrial authorities had the advantages of a standard working week of forty hours or, in certain cases, less.

### Hourly wage rates

The average rates of wage in the preceding tables are based on the minimum rates prescribed for selected occupations in awards, etc. for a full week's work, excluding overtime. However, the number of hours constituting a full week's work differs in some instances between various occupations in each State, and between the same occupations in the several States. For some purposes a better comparison may be obtained by reducing the results in the preceding paragraphs to a common basis, namely the rate of wage per hour. The particulars of weighted average minimum hourly rates of wage given in the following tables relate to all industry groups except rural, and shipping and stevedoring. The rural industry is not included in the index, and shipping and stevedoring has been excluded because, for some of the occupations in this group, definite particulars for the computation of average working hours and hourly rates of wage are not available.

The following table shows the weighted average minimum hourly rates of wage payable to adult male workers and index numbers of hourly rates in each State.

**HOURLY WAGE RATES (a): ADULT MALES  
STATES, DECEMBER 1950 TO 1970**

**WEIGHTED AVERAGE MINIMUM HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES**

<i>End of December—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>RATES OF WAGE (b)</b> (cents)							
1950 . . .	51.63	50.48	48.83	49.53	50.29	49.52	50.58
1960 . . .	90.91	87.57	87.79	85.61	89.89	88.08	88.92
1968 . . .	123.68	122.08	122.38	120.39	119.48	122.88	122.44
1969 . . .	130.87	129.18	129.57	126.45	126.84	129.55	129.51
1970 . . .	135.14	133.12	137.19	128.75	139.48	134.10	134.54

<b>INDEX NUMBERS</b> (Base: Weighted Average Hourly Wage Rates for Australia, 1954 = 100)							
1950 . . .	73.0	71.4	69.0	70.0	71.7	70.0	71.5
1960 . . .	128.5	123.8	124.1	121.0	127.1	124.5	125.7
1968 . . .	174.8	172.5	173.0	170.2	168.9	173.7	173.1
1969 . . .	185.0	182.6	183.1	178.7	179.3	183.1	183.0
1970 . . .	191.0	188.2	193.9	182.0	197.1	189.5	190.1

(a) Weighted average hourly rates of wage for all industry groups except rural, and shipping and stevedoring. See page 248. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

The following table shows the weighted average minimum hourly rates of wage payable to adult female workers and index numbers of hourly rates in each State.

**HOURLY WAGE RATES: ADULT FEMALES  
STATES, DECEMBER 1951 TO 1970**

**WEIGHTED AVERAGE MINIMUM HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES**

<i>End of December—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>RATES OF WAGE (a)</b> (cents)							
1951 . . .	43.58	43.25	40.60	42.81	40.85	41.86	42.92
1960 . . .	66.09	61.94	60.28	61.08	63.14	60.37	63.44
1968 . . .	89.88	86.71	87.40	84.50	85.79	84.44	87.84
1969 . . .	97.89	93.14	94.80	89.76	92.19	93.23	95.00
1970 . . .	102.69	97.06	102.21	93.39	100.55	96.22	99.84

<b>INDEX NUMBERS</b> (Base: Weighted Average Hourly Wage Rate for Australia, 1954 = 100)							
1951 . . .	86.9	86.2	80.9	85.3	81.4	83.4	85.6
1960 . . .	131.7	123.5	120.1	121.7	125.8	120.3	126.4
1968 . . .	179.2	172.8	174.2	168.4	171.0	168.3	175.1
1969 . . .	195.1	185.7	189.0	178.9	183.8	185.8	189.4
1970 . . .	204.7	193.5	203.7	186.1	200.4	191.8	199.0

(a) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

**Weighted average standard weekly hours of work**

The 40-hour week has operated in Australia generally from 1 January 1948, and in New South Wales from 1 July 1947 (see page 248). However, as stated on page 248, the number of hours constituting a full week's work (excluding overtime) differs between occupations and or between States. The weighted average standard hours of work (excluding overtime) prescribed in awards, determinations and agreements for a full working week, in respect of adult male workers in all industry groups except rural, and shipping and stevedoring, at 31 December 1970, were: New South Wales, 39.95; Victoria, 39.97; Queensland, 39.98; South Australia, 39.96; Western Australia, 39.89; Tasmania, 39.97; Australia, 39.96. Corresponding figures for adult female workers at 31 December 1970 were: New South Wales, 39.53; Victoria, 39.81; Queensland, 39.70; South Australia, 39.77; Western Australia, 39.78; Tasmania, 39.63; Australia, 39.67.

**Average weekly earnings**

NOTE. *Particulars of average weekly earnings for the years 1961-62 to 1969-70 were being revised when this chapter was sent for press. Revised figures will be found in the Appendix.*

The figures in this section are derived from particulars of employment and of wages and salaries recorded on pay-roll tax returns, from other direct collections, and from estimates of the unrecorded balance. The figures relate to civilians only.

Particulars of wages and salaries paid are not available for males and females separately from these sources; average weekly earnings have therefore been calculated in terms of male units, i.e. total male employees plus fifty-five per cent of female employees. This proportion is derived from the estimated ratio of female to male earnings in Australia. In calculating the figures shown in the following table the same ratio of female to male earnings has been used in each State. Because the actual ratio may vary between States precise comparisons between average earnings in different States cannot be made on the basis of the figures shown. Quarterly figures corresponding to those shown in the table are published in the quarterly statement *Average Weekly Earnings*, in the monthly bulletin *Wage Rates and Earnings* and in the *Monthly Review of Business Statistics*.

Particulars of average weekly earnings per employed male unit are shown in the following table for each of the years 1960-61 to 1969-70.

**AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT(a)**  
**STATES, 1960-61 TO 1969-70**  
(£)

Year	N.S.W.(b)	Vic.	Qld	S.A.(c)	W.A.	Tas.	Aust.
1960-61	48.10	47.20	41.60	43.40	41.60	43.30	46.00
1961-62	49.10	48.50	43.20	44.70	43.00	45.30	47.20
1962-63	50.20	50.10	44.40	45.80	44.20	45.90	48.40
1963-64	52.60	52.50	46.90	48.20	47.20	48.40	50.90
1964-65	56.50	56.40	50.40	52.00	49.50	51.00	54.60
1965-66	58.60	59.20	52.50	53.80	54.10	53.80	57.00
1966-67	62.40	63.00	55.60	56.90	58.30	57.40	60.70
1967-68	66.00	66.80	58.80	60.40	62.50	61.00	64.30
1968-69	71.60	71.20	62.60	64.30	67.20	64.10	68.90
1969-70	77.40	77.00	68.40	69.90	74.90	70.00	75.00

(a) In addition to award rates of pay, includes earnings of salaried employees, overtime earnings, over-award and bonus payments, payments made in advance or retrospectively during the periods specified, etc. See explanatory notes above.  
(b) Includes Australian Capital Territory. (c) Includes Northern Territory.

The following table shows, for 'All industries' and for 'Manufacturing', the movement in average weekly earnings from 1960-61 to 1969-70. The 'All industries' index is based on pay-roll tax returns and other data. It relates to average weekly earnings per employed male unit. The index for manufacturing industries is based on the average earnings of male wage and salary earners employed in factories as disclosed by annual factory censuses.

The index numbers for 'All industries' and 'Manufacturing' show the movement in average earnings for each group over a period of time. However, they do not give, at any point of time, a comparison of actual earnings in the two groups. The base of each series is: year 1953-54 = 100, and both series have been seasonally adjusted.



**INDEXES OF AVERAGE WEEKLY EARNINGS(a)(b): AUSTRALIA  
1960-61 TO 1969-70**

SEASONALLY ADJUSTED

(Base of each index: year 1953-54 = 100)

Year	All industries	Manu- facturing	Year	All industries	Manu- facturing
1953-54 . . . . .	100.0	100.0	1965-66 . . . . .	174.6	173.1
1960-61 . . . . .	140.6	141.1	1966-67 . . . . .	186.0	184.3
1961-62 . . . . .	144.7	143.4	1967-68 . . . . .	197.0	194.9
1962-63 . . . . .	148.3	147.7	1968-69 . . . . .	211.7	208.7
1963-64 . . . . .	155.9	154.8	1969-70 . . . . .	229.5	224.7
1964-65 . . . . .	167.3	167.1			

(a) See footnote (a) to table on page 250.

(b) Average earnings per employed male unit.

## Surveys of wage rates, earnings and hours, 1960 to 1969

Since 1960 a number of statistical surveys of wages and hours of work in Australia have been undertaken by this Bureau. The object of these surveys has been to obtain information on wage rates, actual weekly earnings and hours of work on a more comprehensive scale than previously available in Australia. A summary of the scope and coverage of each of these surveys is shown on the following pages.

### Survey of wage rates and earnings, September 1960

This survey, relating to the last pay-period in September 1960, obtained information about marginal rates of wage and the dissection and distribution of actual weekly earnings of adult male employees (excluding part-time and casual employees). In addition to the exclusion of government and semi-government employees, and private employees in rural industry and in private domestic service, the survey did not cover the following—shipping and stevedoring industries; the motion picture industry; certain businesses such as those of accountants, consultant engineers, etc.; and trade associations, etc. The survey was based on a stratified random sample of private employers in other industries who were subject to pay-roll tax (that is, employers paying more than \$400 a week in wages and salaries). For information on the results of the survey see Year Book No. 51, pages 439-42.

### Survey of weekly earnings, October 1961

This survey was conducted for the last pay-period in October 1961 and provided information about the distribution of actual weekly earnings for adult male employees (excluding part-time and casual employees). The survey did not cover government or semi-government employees, private employees in rural industry and in private domestic service, or employees not covered by pay-roll tax returns. The survey was based on a stratified random sample of private employers in other industries who were subject to pay-roll tax (that is, employers paying more than \$400 a week in wages and salaries). The results of the survey were published in Year Book No. 51, pages 442-4.

### Surveys of weekly earnings and hours, October 1962 to 1969 (excluding October 1965)

For details of these surveys see pages 252-7.

### Survey of weekly earnings, October 1965

A survey of weekly earnings of male employees was conducted for the last pay-period in October 1965. The survey was conducted by means of: (i) a sample of private employers subject to pay-roll tax (that is those paying more than \$400 a week in wages and salaries); (ii) a complete coverage of Commonwealth and State government departments and semi-government authorities; and (iii) a sample of local government authorities. It related to certain specified industry groups only.

The object of the survey was to obtain estimates of the numbers and proportions of full-time adult male employees in various weekly earnings groups and a dissection of total weekly earnings paid to full-time adult males into: (i) overtime earnings; (ii) ordinary time earnings at 'award, etc. rates'; and (iii) ordinary time earnings in excess of those at 'award, etc. rates' (divided into (a) payment by measured result and (b) other) as defined. The survey also provided figures of average weekly earnings for full-time adult male and junior male employees. Separate details were obtained for (i) managerial, executive, professional and higher supervisory staff, and (ii) other full-time male employees. The results of the survey were published in previous issues of the Year Book. For further details see *Labour Report* No. 52, 1965 and 1966.

### Surveys of weekly earnings and hours, October 1962 to October 1969

Sample surveys in respect of most private employers subject to pay-roll tax (i.e. those paying more than \$400 per week in wages and salaries) have been conducted as at the last pay-period in October during recent years. Some results of the 1969 survey and comparisons with earlier such surveys are contained in the following tables. Further particulars including averages for each State were published in statistical bulletin, *Survey of Weekly Earnings and Hours*, October 1969.

In addition to obtaining data for the calculation of average weekly earnings, average weekly hours paid for, and average hourly earnings, information on overtime and ordinary time earnings and hours for full-time employees (other than managerial, etc. staff) was obtained from surveys beginning with the October 1966 survey. The figures of average overtime earnings and average overtime hours are the averages for *all* employees (in the specified category) represented in the survey whether or not they worked overtime. The survey figures do not show the average overtime earnings or hours of only those employees who worked overtime.

Figures of average weekly earnings, average weekly hours paid for, and average hourly earnings as at the selected pay-periods are presented for males and females (adult and junior) separately by industry groups and by States. They reflect the effects of differences (and of changes between points of time) in amounts paid for the various occupations; in amounts paid for the same occupations; in occupational structures within industries; in industry structure; in degrees of business activity (incidence of overtime, etc.); and in the incidence of incentive schemes, piecework and profit-sharing scheme payments, etc.

#### Coverage

The results of the surveys are based on returns from stratified random samples of private employers subject to pay-roll tax. Employees in rural industry and in private domestic service are excluded because most employers in these two industries are not subject to pay-roll tax. Also excluded from the surveys are: employees of government and semi-government authorities; employees of religious, benevolent and other similar organisations exempt from pay-roll tax; and all employees in the Northern Territory and the Australian Capital Territory. The earnings and hours of waterside workers employed on a casual basis are excluded because they are subject to wide fluctuations for short periods such as those covered by these surveys. Waterside workers on weekly hire employed under the new permanent employment scheme are included in the surveys.

Approximately 4,600 employers were included in the October 1969 survey and the sample represented 1,710,000 male and 761,000 female wage and salary earners.

As the survey was based on a sample, the resultant estimates are subject to sampling variability, that is, variations which might occur by chance because only a sample of employers was surveyed. The extent of the detail published has been determined after considering estimated measures of sampling variability.

#### Comparability of results

In addition to affecting the results of each sample survey, sampling variability also affects comparison between each year's results.

The industry classification adopted for the 1969 and previous earnings and hours surveys from 1963 onwards (including the 1965 survey) is that used for the 1961 and 1966 population censuses. Because the October 1962 survey was based on a different industry classification only broad comparison with more recent surveys is possible (see tables in Year Book No. 54, pages 302 and 305). Some comparison of the results of the surveys of 1964, 1966, 1967, 1968 and 1969 are shown in the tables on pages 255-7.

The October 1965 Survey of Weekly Earnings was a special purpose survey on a different basis from the surveys compared in this section and, therefore, its results are not shown herein. Results of the 1965 survey were published in detail in *Labour Report* No. 52, 1965 and 1966.

In the surveys of October 1962, 1963 and 1964 employees 'whose hours of work were not known' were reported with managerial, etc. staff. Beginning with the October 1966 survey employers were asked to report these employees in their correct classification, and if necessary estimate their hours of work. It is considered that any reporting differences will have had only a slight effect on comparability of the surveys.

The allocation of employees between 'Managerial, executive, professional and higher supervisory staff' and 'All other full-time employees' (as defined) depends upon the employers' interpretation of the definitions (*see below*).

## Definitions

The following definitions refer to terms used in the surveys and in the tables in this section.

*Employees* refers to male and female employees on the pay-roll and who received pay for the last pay-period in October.

*Adults* includes all employees 21 years of age and over and those employees who, although under 21 years of age, are paid at the adult rate for their occupation.

*Juniors* refers to those employees under 21 years of age who are not paid at the adult rate for their occupation.

*Full-time employees* refers to those employees who ordinarily work 30 hours or more a week and who received pay for the last pay-period in October. Included are 'full-time' employees on short-time; 'full-time' employees who began or ceased work during the pay-period; and 'full-time' employees on paid annual leave, paid sick leave, long service leave and paid holidays taken during the pay-period.

*Part-time employees* refers to employees who ordinarily work less than 30 hours a week. Employees on short-time who normally work 30 hours or more a week are classified as full-time employees.

*Other than managerial, etc. staff* includes minor supervisory employees, leading hands, clerical and office staff as well as ordinary wages employees. It excludes *managerial, executive, professional and higher supervisory staff* who were not further defined.

*Weekly earnings* refers to gross earnings for the last pay-period in October before taxation and other deductions have been made. It includes ordinary time earnings, overtime earnings, shift allowances, penalty rates, commission and similar payments; and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the pay-period. It includes one week's proportion of payments made other than on a weekly basis, e.g. salary paid fortnightly or monthly; paid annual or other leave taken during the pay-period; periodical payments under incentive, piecework, profit sharing schemes, etc.; commissions; annual or periodical bonuses, etc. Retrospective payments are excluded.

*Overtime earnings* refers to that part of gross weekly earnings (as defined above) for hours paid for in excess of award, standard or agreed hours of work. Overtime earnings were not reported for managerial, etc. staff.

*Ordinary time earnings* refers to that part of gross weekly earnings (as defined above) for award, standard or agreed hours of work. It includes shift allowances, penalty rates, commissions, bonuses and incentive payments, and that part of paid annual and other leave, which relates to these hours.

*Weekly man-hours paid for* refers to the sum of man-hours for which payment was made. It includes ordinary time hours, overtime hours, paid stand-by or reporting time; and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the specified pay-period. For employees paid other than weekly, hours are converted to a weekly basis. For employees who began or ceased work, or were absent without pay for any reason during the specified week, only the man-hours actually paid for are included. Where agreed hours of work are less than award hours, man-hours are based on agreed hours. Hours of work were not reported for managerial, etc. staff.

*Overtime hours* refers to hours in excess of award, standard or agreed hours of work.

*Ordinary time hours* refers to award, standard or agreed hours of work. It includes man-hours of stand-by or reporting time which are part of standard hours of work, and that part of paid annual leave, paid sick leave and long service leave taken during the specified week.



**AVERAGE WEEKLY EARNINGS AND HOURS (OVERTIME AND ORDINARY TIME)(a), FULL-TIME EMPLOYEES (OTHER THAN MANAGERIAL, ETC. STAFF)(b): INDUSTRY GROUPS, AUSTRALIA(c), OCTOBER 1969(d)**

Industry group	Average weekly earnings (\$)			Average weekly hours paid for			Average weekly earnings (\$)			Average weekly hours paid for		
	Over-time earnings	Ordinary time earnings	Total	Over-time hours	Ordinary time hours	Total	Over-time earnings	Ordinary time earnings	Total	Over-time hours	Ordinary time hours	Total
	ADULT MALES						JUNIOR MALES					
Manufacturing—												
Extracting, refining and founding of metals	14.70	64.50	79.20	6.5	39.1	45.5	4.10	34.80	38.90	2.8	38.9	41.7
Engineering and metal-working	14.00	61.00	75.10	6.1	38.6	44.7	3.80	32.30	36.00	2.9	38.4	41.3
Ships, vehicles, parts and accessories	11.20	60.80	71.90	4.8	38.4	43.2	2.80	32.40	35.30	2.3	38.8	41.0
Founding, engineering, vehicles, etc.	13.40	61.50	74.90	5.8	38.6	44.5	3.60	32.70	36.30	2.7	38.6	41.3
Textiles, clothing and footwear	10.80	57.40	68.30	5.1	38.7	43.8	4.00	29.50	33.50	3.2	37.9	41.1
Food, drink and tobacco	11.30	57.20	68.50	5.0	38.6	43.7	3.60	31.00	34.60	2.5	38.3	40.8
Paper, printing, book-binding and photography	9.50	70.20	79.60	3.8	38.9	42.7	3.40	34.40	37.80	2.4	38.9	41.3
Chemicals, dyes, explosives, paints, non-mineral oils	10.40	63.50	73.90	4.4	38.6	43.0	3.10	35.30	38.40	2.0	38.7	40.7
Other	12.60	59.10	71.70	5.8	38.5	44.3	3.80	31.50	35.30	3.0	38.6	41.6
Manufacturing groups	12.40	61.00	73.30	5.5	38.6	44.1	3.60	32.30	36.00	2.7	38.5	41.3
Non-manufacturing—												
Mining and quarrying	18.00	77.50	95.50	7.0	37.8	44.8	6.80	45.50	52.30	4.2	38.0	42.2
Building and construction	16.00	64.20	80.20	6.4	38.2	44.6	2.40	34.10	36.50	1.8	39.0	40.8
Transport and storage	19.60	62.10	81.60	7.9	38.8	46.6	4.50	34.80	39.30	3.2	39.1	42.3
Finance and property	1.80	78.00	79.80	0.7	37.9	38.6	0.70	39.00	39.70	0.4	38.3	38.7
Wholesale trade, primary produce dealing, etc.	6.60	62.40	68.90	2.9	38.8	41.7	1.90	32.50	34.40	1.5	39.1	40.6
Retail trade	4.30	58.60	62.90	2.0	39.6	41.6	2.00	30.10	32.20	1.7	39.6	41.4
Other industries(e)	7.50	63.50	71.00	3.4	38.8	42.2	1.80	34.70	36.50	1.3	38.2	39.5
Non-manufacturing groups	10.30	64.60	74.90	4.3	38.7	42.9	2.00	33.70	35.70	1.5	39.0	40.5
All industry groups(f)	11.50	62.50	74.00	4.9	38.7	43.6	2.80	33.00	35.80	2.1	38.8	40.6
	ADULT FEMALES						JUNIOR FEMALES					
Manufacturing groups	2.70	38.50	41.20	1.9	37.9	39.8	1.10	25.90	27.00	1.1	37.9	39.1
Non-manufacturing groups	1.30	44.20	45.50	0.8	38.2	39.0	0.60	28.80	29.40	0.5	38.4	39.0
All industry groups(f)	2.10	41.20	43.20	1.4	38.1	39.4	0.80	27.90	28.60	0.7	38.3	39.0

(a) Average weekly overtime and ordinary time earnings and hours are averages for all employees represented in the survey (see page 253). (b) Private employees only. Excludes managerial, executive, professional and higher supervisory staff. (c) Excludes Northern Territory and Australian Capital Territory. (d) Last pay-period in October. For definitions and particulars of coverage of the survey, etc. see pages 252-3. (e) Includes community and business services; amusement, hotels, cafes, personal service, etc.; electricity, gas, water supply and sanitary services; and forestry, fishing and trapping. (f) Excludes rural industry, and private domestic service.

## AVERAGE WEEKLY EARNINGS, FULL-TIME EMPLOYEES (OTHER THAN MANAGERIAL ETC. STAFF)(a): INDUSTRY GROUPS, AUSTRALIA(b), OCTOBER 1967, 1968 AND 1969(c)

(\$)

Industry group	Adult males			Junior males			Adult females			Junior females		
	Oct. 1967	Oct. 1968	Oct. 1969	Oct. 1967	Oct. 1968	Oct. 1969	Oct. 1967	Oct. 1968	Oct. 1969	Oct. 1967	Oct. 1968	Oct. 1969
Manufacturing—												
Extracting, refining and founding of metals . . .	67.30	73.10	79.20	34.20	40.20	38.90	39.60	42.40	45.60	28.00	30.80	32.80
Engineering and metalworking . . .	65.30	72.00	75.10	32.00	34.90	36.00	35.90	38.10	42.00	25.70	26.40	29.40
Ships, vehicles, parts and accessories . .	65.10	67.60	71.90	31.60	34.00	35.30	37.20	38.10	42.40	26.70	26.70	30.20
Founding, engineering, vehicles, etc. . . . .	65.60	71.10	74.90	32.20	35.50	36.30	36.30	38.30	42.30	26.10	26.90	29.90
Textiles, clothing and footwear . . . . .	60.00	63.10	68.30	29.70	31.10	33.50	35.70	36.80	40.50	21.10	21.80	23.80
Food, drink and tobacco . . . . .	62.10	63.50	68.50	33.40	32.80	34.60	36.60	37.40	40.40	25.00	24.80	27.20
Paper, printing, book-binding and photography . . .	70.50	74.50	79.60	32.20	34.50	37.80	37.60	39.50	41.90	24.50	25.60	28.20
Chemicals, dyes, explosives, paints, non-mineral oils . .	65.30	69.70	73.90	36.50	37.10	38.40	38.00	40.00	42.70	27.90	29.00	31.00
Other . . . . .	62.60	65.40	71.70	30.70	32.20	35.30	36.10	36.50	40.70	24.80	24.40	28.50
Manufacturing groups . . . . .	64.50	68.60	73.30	32.00	34.20	36.00	36.30	37.60	41.20	23.70	24.40	27.00
Non-manufacturing—												
Mining and quarrying . . . . .	81.50	85.60	95.50	41.00	47.90	52.30	45.30	50.00	54.70	29.70	33.40	36.40
Building and construction . . . . .	69.40	77.50	80.20	33.00	36.30	36.50	41.50	43.40	46.90	28.60	28.20	32.40
Transport and storage . . . . .	70.70	74.00	81.60	33.80	36.10	39.30	42.20	44.30	48.80	27.80	28.30	33.30
Finance and property . . . . .	68.80	70.50	79.80	33.40	35.20	39.70	42.00	44.00	49.90	27.70	28.30	33.50
Wholesale trade, primary produce dealing, etc. . . . .	60.00	63.70	68.90	30.40	31.40	34.40	39.40	41.10	45.90	25.50	26.70	30.00
Retail trade . . . . .	56.40	59.80	62.90	28.30	31.30	32.20	37.70	39.70	43.10	23.50	24.60	26.10
Other industries(d) . . . . .	61.90	65.20	71.00	32.60	32.90	36.50	38.50	40.80	45.10	25.60	25.90	29.40
Non-manufacturing groups . . . . .	64.70	69.40	74.90	31.10	33.30	35.70	39.20	41.20	45.50	25.40	26.20	29.40
All industry groups(e) . . . . .	64.60	69.00	74.00	31.50	33.80	35.80	37.60	39.30	43.20	24.80	25.60	28.60

(a) Private employees only. Excludes managerial, executive, professional and higher supervisory staff. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October. For definitions and particulars of coverage of the surveys, etc. see pages 252-3. (d) Includes community and business services; amusement, hotels, cafes, personal service, etc.; electricity, gas, water and sanitary services; and forestry, fishing and trapping. (e) Excludes rural industry, and private domestic service.

**AVERAGE WEEKLY HOURS PAID FOR, FULL-TIME EMPLOYEES (OTHER THAN  
MANAGERIAL, ETC. STAFF)(a): INDUSTRY GROUPS, AUSTRALIA(b)  
OCTOBER 1967, 1968 AND 1969(c)**

Industry group	Adult males			Junior males			Adult females			Junior females		
	Oct. 1967	Oct. 1968	Oct. 1969	Oct. 1967	Oct. 1968	Oct. 1969	Oct. 1967	Oct. 1968	Oct. 1969	Oct. 1967	Oct. 1968	Oct. 1969
Manufacturing—												
Extracting, refining and founding of metals	44.5	44.8	45.5	41.5	41.4	41.7	39.9	40.0	40.6	39.7	39.7	40.2
Engineering and metal-working	44.2	44.8	44.7	40.9	41.5	41.3	39.0	39.4	40.3	39.0	39.3	38.9
Ships, vehicles, parts and accessories	43.1	41.9	43.2	41.0	41.0	41.0	39.5	38.9	39.8	38.8	39.1	39.5
Founding, engineering, vehicles, etc.	44.0	44.1	44.5	41.0	41.4	41.3	39.1	39.4	40.2	39.0	39.3	39.2
Textiles, clothing and footwear	42.8	43.2	43.8	41.1	40.8	41.1	39.1	39.1	39.7	39.0	38.3	38.8
Food, drink and tobacco	44.1	43.6	43.7	41.8	41.7	40.8	39.9	39.7	39.6	39.5	39.4	39.1
Paper, printing, book-binding and photography	42.3	42.1	42.7	41.3	40.8	41.3	39.8	39.2	39.4	39.7	39.6	39.6
Chemicals, dyes, explosives, paints, non-mineral oils	42.5	43.5	43.0	41.3	41.0	40.7	39.2	39.2	39.3	39.0	39.0	38.7
Other	44.0	43.8	44.3	41.7	40.9	41.6	39.8	39.6	39.8	39.1	39.2	39.2
Manufacturing groups	43.7	43.7	44.1	41.3	41.2	41.3	39.3	39.3	39.8	39.2	39.0	39.1
Non-manufacturing—												
Mining and quarrying	43.8	43.4	44.8	41.1	41.7	42.2	38.1	39.4	39.0	38.7	38.7	39.3
Building and construction	43.6	45.2	44.6	41.3	41.0	40.8	38.6	39.0	39.1	39.1	38.9	39.6
Transport and storage	46.6	45.8	46.6	42.3	41.9	42.3	39.4	39.5	39.4	39.1	38.7	38.9
Finance and property	38.7	38.7	38.6	38.5	38.7	38.7	37.9	38.0	38.0	38.1	38.1	38.1
Wholesale trade, primary produce dealing, etc.	41.3	41.3	41.7	40.6	40.5	40.6	39.0	38.7	38.8	38.8	38.8	38.9
Retail trade	41.5	41.8	41.6	41.2	41.3	41.4	39.5	39.2	39.5	39.7	39.9	39.8
Other industries(d)	42.0	41.9	42.2	39.8	39.7	39.5	39.0	38.9	39.0	37.8	38.1	38.1
Non-manufacturing groups	42.4	42.7	42.9	40.5	40.5	40.5	39.0	38.9	39.0	38.9	39.0	39.0
All industry groups(e)	43.1	43.3	43.6	40.9	40.9	40.9	39.2	39.1	39.4	39.0	39.0	39.0

(a) Private employees only. Excludes managerial, executive, professional and higher supervisory staff. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October. For definitions and particulars of coverage of the surveys, etc. see pages 252-3. (d) Includes community and business services; amusement, hotels, cafes, personal service, etc.; electricity, gas, water and sanitary services; and forestry, fishing and trapping. (e) Excludes rural industry, and private domestic service.

In the following table the average weekly earnings, average weekly hours paid for, and average hourly earnings at the last pay-period in October for the years 1966 to 1969 are shown for full-time males and females (adult and junior).

**AVERAGE EARNINGS AND HOURS FOR FULL TIME EMPLOYEES (OTHER THAN  
MANAGERIAL, ETC. STAFF)(a): ALL INDUSTRY GROUPS, AUSTRALIA(b)  
OCTOBER 1966 TO 1969(c)**

	Average weekly earnings (\$)				Average weekly hours paid for				Average hourly earnings (\$)			
	Oct. 1966	Oct. 1967	Oct. 1968	Oct. 1969	Oct. 1966	Oct. 1967	Oct. 1968	Oct. 1969	Oct. 1966	Oct. 1967	Oct. 1968	Oct. 1969
Adult males	61.20	64.60	69.00	74.00	43.0	43.1	43.3	43.6	1.42	1.50	1.59	1.70
Junior males	29.40	31.50	33.80	35.80	40.7	40.9	40.9	40.9	0.72	0.77	0.83	0.88
Adult females	35.40	37.60	39.30	43.20	39.2	39.2	39.1	39.4	0.90	0.96	1.00	1.10
Junior females	23.60	24.80	25.60	28.60	39.1	39.0	39.0	39.0	0.60	0.64	0.66	0.73

(a) Private employees only. Excludes managerial, executive, professional, and higher supervisory staff. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October. For definitions and particulars of coverage of the surveys, etc. see pages 252-3.



**AVERAGE WEEKLY EARNINGS, FULL-TIME MALE MANAGERIAL, EXECUTIVE, ETC. STAFF(a): INDUSTRY GROUPS, AUSTRALIA(b), OCTOBER 1966 TO OCTOBER 1969(c)**

(\$)

Industry group	October 1966	October 1967	October 1968	October 1969
<b>Manufacturing—</b>				
Extracting, refining and founding of metals . . . . .	114.60	120.20	129.40	135.10
Engineering and metalworking . . . . .	99.40	104.60	111.20	118.30
Ships, vehicles, parts and accessories . . . . .	100.30	107.20	109.90	117.00
Founding, engineering, vehicles, etc. . . . .	100.90	106.60	112.60	119.40
Textiles, clothing and footwear . . . . .	95.00	100.60	103.20	114.80
Food, drink and tobacco . . . . .	97.40	98.00	103.40	112.40
Paper, printing, bookbinding and photography . . . . .	99.50	109.90	111.40	117.90
Chemicals, dyes, explosives, paints, non-mineral oils . . . . .	109.10	112.90	119.90	126.80
Other . . . . .	96.50	101.40	106.60	112.70
Manufacturing groups . . . . .	99.50	104.60	109.80	117.20
<b>Non-manufacturing—</b>				
Mining and quarrying . . . . .	123.50	134.90	137.50	147.40
Building and construction . . . . .	103.30	103.00	105.30	117.10
Transport and storage . . . . .	97.70	103.60	109.80	116.20
Finance and property . . . . .	106.50	110.80	118.00	130.30
Wholesale trade, primary produce dealing, etc. . . . .	97.00	105.30	110.00	118.40
Retail trade . . . . .	80.70	84.50	88.10	97.00
Other industries(d) . . . . .	95.30	102.10	107.50	114.80
Non-manufacturing groups . . . . .	96.00	101.60	106.70	116.60
All industry groups(e) . . . . .	97.50	102.90	108.10	116.90

(a) Private employees only. Includes managerial, executive, professional and higher supervisory staff. For definitions and particulars of coverage of the surveys, etc. see pages 252-3. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October. (d) Includes community and business services; amusement, hotels, cafes, personal service, etc.; electricity, gas, water and sanitary services; and forestry, fishing and trapping. (e) Excludes rural industry, and private domestic service.

**AVERAGE WEEKLY EARNINGS, FULL-TIME FEMALE MANAGERIAL, EXECUTIVE, ETC. STAFF(a): INDUSTRY GROUPS, AUSTRALIA(b), OCTOBER 1964 TO 1969**

(\$)

Survey	Manu- facturing groups	Non- manu- facturing groups	All industry groups(e)
<b>October(c)—</b>			
1964 . . . . .	38.70	44.20	41.40
1966 . . . . .	54.10	55.20	54.80
1967 . . . . .	60.50	58.90	59.40
1968 . . . . .	60.60	63.50	62.50
1969 . . . . .	64.90	68.00	67.10

For footnotes see table above.

**AVERAGE EARNINGS AND HOURS, PART-TIME EMPLOYEES(a): AUSTRALIA(b), OCTOBER 1964 TO 1969(c)**

Survey	Average weekly earnings (\$)				Average weekly hours paid for				Average hourly earnings (\$)			
	Adult males	Junior males	Adult females	Junior females	Adult males	Junior males	Adult females	Junior females	Adult males	Junior males	Adult females	Junior females
<b>October(c)—</b>												
1964 . . . . .	16.60	4.70	15.50	4.40	13.4	6.7	17.3	6.4	1.24	0.70	0.90	0.69
1966 . . . . .	19.70	4.50	17.70	4.50	14.1	6.1	17.1	7.0	1.40	0.73	1.03	0.65
1967 . . . . .	20.10	4.40	18.70	4.60	14.1	5.8	17.3	6.3	1.43	0.76	1.08	0.73
1968 . . . . .	21.30	4.50	20.00	5.00	14.1	5.8	17.3	7.4	1.51	0.78	1.16	0.67
1969 . . . . .	23.40	5.70	21.70	7.00	14.1	7.1	17.6	9.4	1.66	0.81	1.23	0.74

(a) Private employees only. Part-time employees are those who normally work less than 30 hours a week. For definitions and particulars of coverage of the surveys, etc. see pages 252-3. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October.

### Survey of weekly earnings and hours, October 1970

The results of this survey were first published in January 1971 in a mimeograph statement *Survey of Weekly Earnings and Hours, October 1970 (Preliminary Results)*. A bulletin (Reference No. 6.1) which contains final results of the survey and comparisons with the surveys of October 1962 to 1969 was published on 8 July 1971.

### Determination of wage rates in Australia

Before June 1967, when the Commonwealth Conciliation and Arbitration Commission decided to eliminate basic wages and margins from Commonwealth awards and to introduce total wages (*see below*), the concept of a basic or living wage was common to wage rates determined by industrial authorities in Australia. Initially, the concept of a basic wage (for adult males) was interpreted as the wage necessary to maintain an average employee and his family in a reasonable state of comfort. However, it was later generally accepted that the basic wage should be fixed at the highest amount which the economy could sustain and that the dominant factor was the capacity of the community to carry the resultant wage levels. Basic wages were determined for adult females as well as for adult males.

In addition to the basic wage, secondary wage payments, including margins for skill, etc. and various kinds of loadings peculiar to the occupation or industry, were determined by industrial authorities. The basic wage and the secondary wage made up the minimum wage rate for a particular occupation.

In the following paragraphs is set out a brief history of the determination of wage rates in Australia by Commonwealth and State industrial authorities. For more detailed information including the history of basic wage determination in Australia *see* previous issues of the Year Book and the annual *Labour Report*.

#### Commonwealth Basic Wage

Basic wages were a feature of awards of the Commonwealth Conciliation and Arbitration Commission (and the Commonwealth Court of Conciliation and Arbitration) over the period 1907 to 1967.

In 1907 the first declaration of a basic wage (\$4.20 a week for Melbourne) was made by Mr Justice Higgins, President of the Commonwealth Court of Conciliation and Arbitration. The wage was known as the 'Harvester' wage and the amount was considered reasonable 'for a family of about five'. From this date onwards basic wages became incorporated into Commonwealth awards.

In 1913 the Commonwealth Court of Conciliation and Arbitration took cognisance of the 'A' Series retail price index numbers for the thirty more important towns of Australia published by the Commonwealth Statistician, and as awards came up for review the Court usually revised the basic wage rate of the award in proportion to variations in the retail price index. In 1921 the system of making automatic quarterly adjustments to the basic wage in direct ratio to variations in 'A' Series retail price index numbers was first introduced. The practice of making automatic quarterly adjustments to the basic wage in proportion to variations in retail price index numbers continued until September 1953.

In addition to the automatic adjustments to the basic wage described in the previous paragraph, basic wage rates in Commonwealth awards were varied as a result of basic wage or national wage inquiries. The last time basic wages were varied in this way was in July 1966, when, as a result of the Basic Wage, Margins and Total Wage Cases of 1966, rates were increased by \$2 a week for adult males and \$1.50 a week for adult females. At that time Commonwealth basic wage rates for capital cities ranged from \$31 to \$33.50 a week for adult males and from \$23.25 to \$25.10 a week for adult females. These rates continued to operate until the decision of the Commonwealth Conciliation and Arbitration Commission in the National Wage Cases of 1967 to eliminate basic wages and margins from Commonwealth awards and introduce total wages to operate from the beginning of the first pay-period to commence on or after 1 July 1967 (*see page 260*).

For table showing Commonwealth basic wage rates for adult males and adult females *see* previous issues of the Year Book and the Appendix to *Labour Report* No. 54, 1968 and 1969.

#### Basic wage rates for females

As a result of the 1949-50 Basic Wage Inquiry the Commonwealth Court of Conciliation and Arbitration fixed the basic weekly wage for adult females at 75 per cent of the corresponding male rate from the beginning of the first pay-period commencing in December 1950. This percentage continued to be prescribed in subsequent inquiries and operated until the basic wage was eliminated from Commonwealth awards in July 1967 (*see above*). Prior to December 1950 the relationship of female basic wages to male basic wages varied from award to award, but was generally between 54 and 56 per cent.

For further particulars regarding female basic wage rates see *Labour Report* No. 46, pages 75-81. Tables of rates are published in the Appendix to *Labour Report* No. 54, 1968 and 1969.

### Basic wage rates, Australian Territories

The determination of basic wage rates in the Northern Territory and the Australian Capital Territory came within the jurisdiction of the Commonwealth Conciliation and Arbitration Commission. Basic wage rates were eliminated from awards operating in these Territories in July 1967 (see above), and total wages were introduced. For tables of basic wages in the Northern Territory and the Australian Capital Territory see Appendix to *Labour Report* No. 54, 1968 and 1969. For further information on the determination of basic wages in the Territories see previous issues of the Year Book and the annual *Labour Report*.

### Commonwealth wage margins

In addition to basic wage rates, awards of Commonwealth and State industrial tribunals specified secondary wage payments consisting of margins and loadings. Margins have been defined as 'minimum amounts awarded above the basic wage to particular classifications of employees for the features attaching to their work which justify payments above the basic wage, whether those features are skill or experience required for the performance of that work, its particularly laborious nature, or the disabilities attached to its performance.'

In the Commonwealth jurisdiction prior to 1954 the Commonwealth Court of Conciliation and Arbitration had not made any general determination in respect of wage margins, but general principles of marginal rate fixation had been enunciated by the Court in the Engineers Case of 1924, the Merchant Service Guild Case in 1942, and the Printing Trades Case of 1947. Major decisions of the Commonwealth Court of Conciliation and Arbitration, and later the Commonwealth Conciliation and Arbitration Commission, affecting margins in Commonwealth awards were made in 1954, 1959, 1963, 1965, and 1966. Details of these decisions can be found in earlier issues of the Year Book and the annual *Labour Report*.

As a result of a decision of the Commonwealth Conciliation and Arbitration Commission in the National Wage Cases of 1967, basic wages and margins were eliminated from Commonwealth awards and total wages were introduced with effect from the beginning of the first pay-period to commence on or after 1 July 1967.

### Commonwealth work value inquiries

In addition to variations of wage margins in Commonwealth awards as a result of the general inquiries in 1954 to 1966 (see above), variations of margins for various occupations were made by the Commission as individual awards came up for review or upon application by trade unions. Similar procedures existed in regard to awards of State industrial tribunals.

As a result of its decision in the Basic Wage, Margins and Total Wage Cases of 1966, the Commonwealth Conciliation and Arbitration Commission, over the period September 1966 and November 1967, undertook a work value inquiry concerning classifications appearing in the Metal Trades Award. On 11 December 1967 the Commission issued a majority decision (Gallagher J. and Commissioner Winter, with Moore J. dissenting), granting increases to adult male classifications to operate from the beginning of the first pay-period commencing on or after 22 January 1968. Of the total 320 classifications, 18 classifications received no increase, 178 received \$1, 9 received \$1.30, 27 received \$2.75, 16 received \$3.75, 47 (tradesmen) received \$7.40, and the remaining 25 classifications amounts ranging between 10 cents and \$10.05 per week. Adult females received proportionate increases. Further details appear in the previous issue of the Year Book.

Following applications by employers concerning the question of absorption in over-award payments of the increases granted to the metal trades in December 1967, the Commonwealth Conciliation and Arbitration Commission heard submissions by employers and trade unions on 14 to 16 February 1968. The pronouncement of the majority of the Commission was made on 21 February 1968.

The Commission, in its pronouncement, made the following decisions. The work value decisions of the Commission in December 1967 (see above) in regard to its amounts should stand. However it was decided that 70 per cent of the prescribed increases should be payable in accordance with the decision of 11 December and that 30 per cent should be deferred. But where the increase was \$1.60 or less per week, the full amount should be paid without deferment, and where the increase was more than \$1.60 the increase payable without deferment should be at least \$1.60. The decision applied to increases granted to adult males and adult females. Adjustments to rates would be in multiples of 5 cents.

The bench of the Commission, which would deal with the economic wage case expected to commence on 6 August 1968, should decide when the deferred portion of the increases should be payable.



On 6 August 1968 the Commonwealth Conciliation and Arbitration Commission decided that the metal trades increases deferred by the February decision (*see above*) would become payable from the beginning of the first pay-period commencing on or after 21 August 1968.

#### **Commonwealth total wages**

In the national wage cases of 1964 and 1965 applications by employers that basic wages and margins should be deleted from Commonwealth awards and total wages introduced were rejected by the Commonwealth Conciliation and Arbitration Commission. However, in its decisions in the Basic Wage, Margins and Total Wage Cases of 1966 the Commission decided to defer the conversion of the wage structure to the basis of a single wage pending further consideration of the present structure of marginal rates (*see page 259*) and further argument. As a result of the National Wage Cases of 1967, in which the employers again applied for a total wage, the Commonwealth Conciliation and Arbitration Commission announced the elimination of basic wages and margins from Commonwealth awards and the introduction of total wages. The total wages were arrived at by adding an amount of \$1 a week to the weekly award wages for each adult male and adult female classification to operate from the beginning of the first pay-period to commence on or after 1 July 1967.

Trade unions unsuccessfully challenged in the High Court the abolition of basic wages and the adoption of total wages by the Commonwealth Commission.

On 4 October 1968 in its decision in the National Wage Case 1968 the Commonwealth Conciliation and Arbitration Commission increased all wage rates for adults (male and female) in Commonwealth awards by \$1.35 a week. The minimum wage for adult males was increased by the same amount. Male and female juniors including apprentices received proportionate increases. The variations came into operation from the beginning of the first pay-period commencing on or after 25 October 1968.

On 1 December 1969 the Commonwealth Conciliation and Arbitration Commission made the following decisions in the National Wage Case 1969. An increase of 3 per cent was awarded to total award wages of adult males and females other than the minimum wage for adult males which was increased by \$3.50 per week. Male and female juniors and apprentices also received a 3 per cent increase in their wage rates. All these variations operated from the beginning of the first pay-period commencing on or after 19 December 1969.

On 14 December 1970 the Commonwealth Conciliation and Arbitration Commission, in its decision in the National Wage Case 1970, awarded a 6 per cent increase to total wage rates in Commonwealth awards, other than the rates of minimum wage for adult males, which were increased by \$4.00 a week. These variations operated from the beginning of the first pay-period commencing on or after 1 January 1971.

#### **Commonwealth minimum wage**

In July 1966 the Commonwealth Conciliation and Arbitration Commission, in its decisions in the Basic Wage, Margins and Total Wage Cases of 1966, inserted in Commonwealth awards provisions for a minimum wage for adult males. The Commission said that it had given detailed consideration to lower paid classifications in the Metal Trades Award and had decided to grant some immediate relief to low wage earners. The Commission in its judgment said that it intended to insert a new provision in awards by which it would be prescribed that no adult male employee should be paid as a weekly wage for working the standard hours of work an amount less than the minimum wage, i.e. his appropriate basic wage rate plus \$3.75 a week. The minimum wage was prescribed for adult male employees only and was applied for all purposes of the award, for example, in calculation of overtime and other penalty rates, piece-work, casual employment, sick leave and annual leave. The Commission stated that the provision for a minimum wage for adult male employees was designed to meet the circumstances of employees in the lowest classifications who were in receipt of award rates and no more. It was not intended to affect the wage of any employee who was already receiving the prescribed minimum through over-award payment. The provision for a minimum wage for adult males operated from the beginning of the first pay-period to commence on or after 11 July 1966. The rates of minimum wage for adult males inserted in Commonwealth awards ranged from \$34.75 to \$37.25 a week for capital cities. These rates were increased by \$1 a week as a result of the decision of the Commonwealth Conciliation and Arbitration Commission in the National Wage Cases of 1967, the increases to operate from the beginning of the first pay-period commencing on or after 1 July 1967. Increases of \$1.35 a week operated from the beginning of the first pay-period commencing on or after 25 October 1968 as a result of the National Wage Case 1968. As a result of the National Wage Case 1969 increases of \$3.50 per week operated from the beginning of the first pay-period commencing on or after 19 December 1969. An increase of \$4.00 a week, as a result of the National Wage Case 1970, operated from the beginning of the first pay-period commencing on or after 1 January 1971.

### Equal pay

Two benches of the Commonwealth Conciliation and Arbitration Commission sat jointly from 25 February 1969 to 22 May 1969 to take evidence and hear argument on trade union claims for equal pay between the sexes in the Equal Pay Cases 1969.

Both benches of the Commission reached a common conclusion and on 19 June 1969 published their decision and reasons for their decision. The Commission said it was prepared to implement the principle of equal pay for equal work by introducing into Commonwealth awards and determinations the principles contained in State acts on equal pay. The Commission stated that no increases should be granted to adult females without an examination of the work done. It also suggested a number of principles to be applied in deciding applications for equal pay. In summary these were: (i) the work considered should be restricted to that performed by both adult males and adult females under terms of the same determination or award; (ii) the work should be the same or of a like nature and of equal value (from the point of view of wage or salary assessment), and to be of the same range and volume and performed under the same conditions; (iii) consideration should be restricted to the general work situation under the determination or award and not to that of one establishment; and (iv) equal pay should not be provided where the work is essentially or usually performed by females but upon which male employees may also be employed.

The Commission decided that implementation of equal pay should be spread over a period so that as from 1 January 1970 implementation would be the same as that under South Australian, Western Australian and Tasmanian Acts. Where a decision was reached prior to 1 October 1969 the female rate would become 85 per cent of the male rate from the beginning of the first pay-period to commence on or after 1 October 1969, increase to 90 per cent of the male rate from the beginning of the first pay-period to commence on or after 1 January 1970, increase to 95 per cent of the male rate from the beginning of the first pay-period to commence on or after 1 January 1971, and become equal to the male rate from the beginning of the first pay-period to commence on or after 1 January 1972. Where a decision was reached on or after 1 October 1969 it should not operate retrospectively. For decisions reached between 1 October 1969 and up to 1 January 1970, 85 per cent of the male rate at the date of operation should apply, and so on according to the above scale. No female rates should be reduced by operation of these formulae.

## Determination of wage rates in State awards, etc.

### New South Wales

The first determination of a standard living wage for adult male employees under New South Wales State awards operated from 16 February 1914, when the Court of Arbitration fixed the rate at \$4.80 a week for the metropolitan area. The first living wage for adult females (\$3.00 a week) was declared by the Board of Trade to operate from 17 December 1918.

From 1926 to 1937 basic wage rates were determined by the Industrial Commission of New South Wales. From July 1927 a State scheme of child endowment became operative in New South Wales (see annual *Labour Report* No. 54, 1968 and 1969, pages 169–71), and this continued until superseded by the Commonwealth Government scheme in July 1941.

From October 1937 to October 1955 the State adult male basic wage for Sydney was the same as the Commonwealth basic wage for Sydney. From the beginning of the first pay-period in November 1955 the State basic wage was automatically adjusted each quarter in accordance with movements in retail price index numbers. (Automatic adjustment of Commonwealth basic wages was discontinued in September 1953.) These automatic adjustments continued until October 1964, when legislation provided that the Commonwealth basic wage for Sydney should apply in State awards and industrial agreements to operate from the beginning of the first pay-period which commenced on or after 19 June 1964.

Between October 1937 and November 1950 the State adult female basic wage for Sydney was 54 per cent of the adult male rate. In December 1950 the adult female rate became 75 per cent of the adult male rate. From January 1963 for male and female employees performing work of the same or like nature and of equal value, the Industrial Commission may prescribe in State awards the same basic wage and secondary wage. In March 1967 the Industrial Commission in Court Session, when considering the adoption of Commonwealth marginal increases for State awards, stated that the general principle in future would be to inject Commonwealth wage increases on economic grounds into the State award structure.

Following the increase of \$1 a week in total wages in Commonwealth awards in July 1967, the Industrial Commission increased award rates of wages and salaries for adult males and adult females by the addition of a fixed loading of \$1 per week, described as 'July 1967 economic loading', to take effect from the beginning of the first pay-period to commence on or after 1 July 1967. Subsequently legislation increased the basic wage for adult males from \$33.50 to \$34.50 per week and



for adult females from \$25.10 to \$26.10 per week to operate from 1 January 1968. The increase of \$1 per week in each basic wage absorbed the 'July 1967 economic loading', which was deleted from State awards and agreements. The legislation also provided for the adjustment of wage rates in State awards by the Industrial Commission subsequent to a decision of the Commonwealth Conciliation and Arbitration Commission to vary Commonwealth wage rates wholly or partly on economic grounds. Changes in the State basic wage for adult males shall not be more than the amount of increase in Commonwealth minimum wages for adult males, and the increase in the adult female basic wage not less than 75 per cent of the increase in the male basic wage. The Industrial Commission and Conciliation Committees were given power to include provisions for minimum wages for adult males or adult females in State awards.

The Industrial Commission of New South Wales increased the basic wages for adult males and adult females by \$1.35 a week from the beginning of the first pay-period commencing on or after 25 October 1968. The weekly basic wage rates then became \$35.85 for adult males and \$27.45 for adult females.

The Industrial Commission of New South Wales on 12 December 1969 determined that rates of wages for timeworkers in State awards should increase by 3 per cent and this resulted in increased basic wages, margins and certain loadings. The adult male basic wage increased by \$1.05 to \$36.90 per week and the adult female basic wage by 85c to \$28.30 per week. Marginal rates for adult males and adult females were increased by 3 per cent as also were certain loadings (e.g. shift allowances, leading hand allowances). Junior rates of pay were also increased by 3 per cent. These variations operated from the beginning of the first pay-period commencing on or after 19 December 1969.

On 21 December 1970 the Industrial Commission of New South Wales determined that the basic wage for adult males be increased by \$2.20 to \$39.10 a week, and the basic wage for adult females be increased by \$1.70 to \$30.00 a week, as from 1 January 1971. The Commission also determined that the marginal rates of pay in awards be increased by 6 per cent, to operate from the beginning of the first pay-period to commence on or after 1 January 1971.

Further information on New South Wales basic wages is published in the annual *Labour Report*. State basic wage rates for Sydney are published in the Appendix to *Labour Report* No. 54, 1968 and 1969.

### Victoria

In Victoria, Wages Boards are constituted for each industry group or calling from representatives of employers and employees with an independent chairman to determine rates of wages and conditions of work.

Except for the period November 1953 to August 1956, when automatic quarterly adjustments to the basic wage in Wages Board determinations operated, Wages Boards in determining wage rates had adopted Commonwealth basic wage rates. The basic wage rates of August 1956 continued to operate until June or July 1959 when the Commonwealth rates for Melbourne, determined as a result of the 1959 Basic Wage Inquiry, were incorporated into Wages Board determinations.

Subsequent to the decisions of the Commonwealth Conciliation and Arbitration Commission in the National Wage Cases of 1967 (*see* page 260), the Industrial Appeals Court decided that basic wages and margins for adult males and adult females should be deleted from Wages Board determinations and that wage rates expressed as total wages should operate from the beginning of the first pay-period in July 1967. At the same time total wages for both adult males and adult females were increased by \$1 a week.

Total wages for both adult males and adult females in Wages Board determinations were further increased by \$1.35 a week operative from the beginning of the first pay-period commencing on or after 25 October 1968.

On 23 December 1969 the Industrial Appeals Court ordered that wage rates in Wages Board determinations should be increased by 3 per cent operative from the beginning of the first pay-period commencing on or after 19 December 1969. The Court also ordered that a minimum wage for adult males of \$42.30 a week should operate in all determinations from the same operative date.

On 11 January 1971 the Industrial Appeals Court, following the 1970 National Wage Case decision (*see* page 260) granted a 6 per cent increase to all wage rates prescribed by Wages Board determinations, except the minimum wage for adult males which was increased by \$4 to \$46.30 a week. These increases operated from the first pay-period to commence on or after 1 January 1971, except for determinations of the Shearing Industry Board and the Agricultural and Pastoral Workers Board which operated from 4 January 1971.

For further information on basic wages in Victorian Wages Board determinations *see* the annual *Labour Report*. Rates for adult males and adult females from November 1953 are published in the appendix to *Labour Report* No. 54, 1968 and 1969.



### Queensland

The first formal declaration of a basic wage in Queensland determined a basic wage of \$8.50 for adult males and \$4.30 for adult females to operate from 1 March 1921. Prior to this declaration the rate of \$7.70 a week for adult males had been generally recognised in awards as the 'basic' or 'living' wage.

Since 1961 the full bench of the Industrial Conciliation and Arbitration Commission, consisting of not less than three Commissioners, has power to make declarations concerning the basic wage for males and females and the standard hours of work. The basic wage for adult males must be sufficient to maintain an employee, his wife, and family of three children in a fair and average standard of comfort. The basic wage for adult females should be not less than is sufficient to enable an employee to support herself in a fair and average standard of comfort. All persons interested must be given an opportunity to be heard before any general declaration regarding the basic wage is made, and the Commission must take into consideration any probable economic effect of such declaration. From 1 May 1961 the basic wage for adult females has been 75 per cent of the male rate.

In March 1965 the Commission stated that it had been decided as a matter of policy, that in the future, it did not propose to deal with an application to vary the basic wage solely because of a change in the Consumer Price Index, unless such a change warranted an alteration of 40 cents or more in the basic wage for adult males.

Following the decision of the Commonwealth Conciliation and Arbitration Commission to increase total wages by \$1 a week in July 1967, the Industrial Commission increased all award rates of pay for both adult males and adult females by \$1 per week to operate from 3 July 1967.

The Industrial Conciliation and Arbitration Commission decided on 25 October 1968 that the increase of \$1.35 per week for adult males and adult females granted by the Commonwealth Conciliation and Arbitration Commission (*see* page 260) should flow to Queensland State awards, and that the increases should be added to basic wages and operate from 28 October 1968. The Commission also decided that the basic wage concept should be maintained and that the \$1 increase granted to adult males and adult females in July 1967 should be absorbed in the basic wages.

The basic wage rates payable in the Southern Division (Eastern District) including Brisbane were \$35.55 for adult males and \$27.25 for adult females operative from 28 October 1968. For basic wages in other areas of the State district allowances are added to these rates (*see* the annual *Labour Report*).

The Industrial Conciliation and Arbitration Commission of Queensland on 12 December 1969 declared that the basic wages for the Eastern District of the Southern Division should be increased by \$1.10 for adult males to \$36.65 per week and by 80 cents for adult females to \$28.05 per week as from 22 December 1969. The Commission further declared by way of a general ruling that the ascertainable marginal content of each adult male and adult female wage or salary rate should be increased by 3 per cent from the same date of operation. The rates of pay for juniors were increased proportionally to the adult increases.

On 17 December 1970 the Industrial Conciliation and Arbitration Commission of Queensland declared that as from 4 January 1971 the basic wage for the Eastern District of the Southern Division should be \$38.85 a week for adult males and \$29.75 a week for adult females. It further declared that as from the same date the ascertainable marginal content of each adult male and adult female wage or salary rate should be increased by 6 per cent and the guaranteed minimum wage for adult males be increased by \$4 to \$46.80 a week.

For further particulars of basic wage determination in Queensland *see* the annual *Labour Report*. Tables of basic wages are published in the Appendix to *Labour Report* No. 54, 1968 and 1969.

### South Australia

The first declaration of a living wage for adult male employees in the metropolitan area was \$7.95 a week operative from 4 August 1921. The first adult female living wage of \$3.50 a week operated from 1 September 1921.

Before July 1966 the Board of Industry had power to declare after public inquiry living wages to be paid to adult males and adult females. Since that date the power has been vested in the Industrial Commission constituted by the President and two Commissioners. However, the South Australian Industrial Code also provides for the declaration of living wages by proclamation to prevent unjustifiable differences between State and Commonwealth rates of wages. This latter method has been used in recent years to declare living wages.

The State living wage for adult males was the same as the Commonwealth basic wage for Adelaide from February 1950 to July 1967, when basic wages were deleted from Commonwealth awards and total wages introduced. The State living wage for adult females was the same as the Commonwealth basic wage for Adelaide from December 1950 to July 1967 and was 75 per cent of the adult male rate.

Following the increase of \$1 a week in total wages in Commonwealth awards in July 1967 (see page 260), by proclamation the State living wages for both adult males and adult females were increased by \$1 a week to operate from 3 July 1967. Further increases of \$1.35 a week were proclaimed to operate from 28 October 1968. The rates then became \$34.65 for adult males and \$26.55 for adult females.

A minimum wage for adult males similar in concept to the Commonwealth award provisions of a minimum wage (see page 260) operates in South Australian State awards. From 28 October 1968 the rate prescribed was \$38.40 a week.

The South Australian Industrial Commission granted the following increases in State awards from 22 December 1969. An 'economic loading' of 3 per cent of the sum of the living wage plus margins was included in all awards and the minimum wage for adult males was increased by \$3.50 to \$41.90 per week.

On 23 December 1970, the Industrial Commission of South Australia made the following decisions, to operate from 4 January 1971. The economic loading of 3 per cent awarded in December 1969 was absorbed in the living wage and margins; new living wages of \$37.85 a week for adult males and \$29.00 a week for adult females were determined; marginal rates were further increased by 6 per cent; and the minimum wage for adult males was increased by \$4.00 to \$45.90 a week.

For further information on South Australian living wages see the annual *Labour Report*. Tables of living wages are published in the Appendix to *Labour Report* No. 54, 1968 and 1969.

### Western Australia

The first declaration of the basic wage by the Court of Arbitration operated from 1 July 1926, when rates of \$8.50 for adult males and \$4.59 for adult females were fixed.

Before December 1966 the Western Australian Industrial Commission in Court Session consisting of three Commissioners (previously the Court of Arbitration) could declare a basic wage at any time on its own motion and must do so when requested by a majority of industrial unions or by the Western Australian Employers' Federation, with the limitation that no new determination should be made within twelve months of the preceding inquiry. Legislation also provided that the Commission (or the Court) might make adjustments to the basic wage each quarter after considering retail price index numbers.

From August 1931 to September 1964 separate basic wages were declared for three areas of the State, namely (a) the metropolitan area, (b) south-west land division, and (c) goldfields areas and other parts of the State. In September 1964, when the Commission increased the basic wage after an inquiry, one rate was declared for the whole of the State.

In December 1951 the basic wages for adult females became 65 per cent of the corresponding male rate, and in January 1960 this proportion was increased to 75 per cent. In each case marginal rates of pay for females were reduced or deleted to offset the increase in the female basic wage.

In December 1966 legislation provided that the Western Australian basic wage rates should be the same as the Commonwealth Six Capitals rates as soon as these exceeded the State rates (\$33.50 a week for adult males and \$25.13 a week for adult females) operative from 24 October 1966.

Following the decision of the Commonwealth Conciliation and Arbitration Commission to increase total wages by \$1 a week from July 1967 (see page 260), the Industrial Commission made the following decisions. Wage rates for adult males not in receipt of the minimum weekly wage and for adult females were increased by 60 cents a week by way of a special loading. The minimum weekly wage for adult males (see page 260) payable under certain awards was increased from \$36.55 to \$37.55 a week. These increases operated from the beginning of the first pay-period commencing on or after 1 July 1967.

In October 1968 the Western Australian Industrial Commission decided upon application by trade unions, to increase by \$1.35 a week the special loading of 60c (see above) payable to adult males and adult females, to operate from the beginning of the first pay-period commencing on or after 25 October 1968. At the same time the Commission increased the minimum wage for adult males from \$37.55 to \$38.90 a week.

Legislation operative from 22 November 1968 fixed the basic wage for adult males at \$35.45 and for adult females at \$27.08 a week. These new rates absorbed the special loading of \$1.95 a week which was deleted from awards. The legislation also provided for the Commission to review the basic wage at least every twelve months, the variations in the basic wage to take effect only after the expiration of twelve months from the last variation unless there were special reasons. The Commission was also required, upon application, to insert in awards provision for equal pay for male and female workers performing work of the same or like nature and of equal value. If application for equal pay was made before 30 June 1970 the difference in male and female basic wages would be removed not later than 1 January 1972. The equal pay provisions do not apply to persons engaged in work essentially or usually performed by female workers but upon which males may be employed.



The Western Australian Industrial Commission on 21 November 1969 increased the adult male basic wage by \$1.00 to \$36.45 per week and the adult female basic wage by 80c to \$27.88 per week operative from 24 November 1969. Later, following the decision in the National Wage Case, the Commission increased the minimum wage for adult males in State awards by \$3.50 to \$42.40 per week operative from the beginning of the first pay-period commencing on or after 19 December 1969.

On 26 October 1970 the Western Australian Industrial Commission determined that the basic wage for adult males be increased to \$38.45 a week, the basic wage for adult females to \$29.40 a week, and the minimum wage for adult males to \$49.00 a week, all operative from 26 October 1970. The Commission also decided that awards would provide for additions to award rates for adult males to raise their wage rates for ordinary hours of work to 110 per cent of the sum of the basic wage and margin. This provision would not apply to those adult males who were already in receipt of this amount by virtue of award provisions or otherwise. This provision would operate from the date of amendment of each award, the first such amendment being inserted into awards in December 1970.

More detailed information on State basic wages in Western Australia appears in earlier issues of the Year Book and the annual *Labour Report*. Basic wage rates for the metropolitan area are published in the Appendix to *Labour Report* No. 54, 1968 and 1969.

### Tasmania

Wages Boards are constituted for a number of industries from representatives of employers and employees with an independent chairman (common to all Wages Boards) with power to determine rates of wage in each industry.

Except for the period February 1956 to August 1956, when Wages Boards adjusted basic wages in accordance with movements in retail price index numbers, Wages Boards generally adopted Commonwealth basic wage rates. From August 1956 the basic wages in determinations remained unchanged until July 1959, when the rates were made the same as the Commonwealth basic wages.

In January 1961 Wages Boards adopted the basic wage for Hobart as the uniform rate applicable throughout the State. During 1962 a number of Wages Boards provided in their determinations for the automatic adoption of Commonwealth basic wages as and when they varied.

In July and August 1967, subsequent to the increase of \$1 in total wages in Commonwealth awards, Wages Boards varied their determinations by increasing basic wages for adult males and adult females by \$1 a week.

In November 1968 the Chairman of Wages Boards recommended a \$1.35 increase in the basic wage for adult males and adult females in Wages Board determinations. The new basic wages operative from the beginning of the first pay-period commencing on or after 15 October 1968 became \$35.75 a week for adult males and \$27.40 for adult females. The increase also applied to the minimum wage for adult males (*see* page 260) which rose from \$38.15 to \$40.45 a week.

Wages Board determinations were amended as follows, these variations operating from the beginning of the first pay-period commencing on or after 19 December 1969. The adult male basic wage was increased by \$1.05 to \$36.80 per week and the adult female basic wage by 80c to \$28.20 per week. Margins were increased by 3 per cent and the minimum wage for adult males was increased by \$2.55 to \$43.00 per week.

On 19 January 1971 the Chairman of Wages Boards announced that determinations of all Tasmanian Wages Boards were to be amended as follows. The basic wage was increased to \$39.00 a week for adult males and to \$29.90 a week for adult females. All margins prescribed in determinations were increased by 6 per cent and the minimum wage for adult males increased by \$4 to \$47.00 a week. These variations operate from the first pay-period commencing on or after 1 January 1971.

Further details of basic wages in Tasmanian Wages Board determinations are published in the annual *Labour Report*. Hobart basic wage rates adopted by Wages Boards from February 1956 are published in the Appendix to *Labour Report* No. 54, 1968 and 1969.

### Annual leave

As summarised in the following paragraphs, the majority of employees in Australia at present receive at least three weeks' paid annual leave. Further information will be found in previous issues of the Year Book.

In its judgment in the Three Weeks Annual Leave Inquiry, 1963, the Commonwealth Conciliation and Arbitration Commission said that it would implement its intention of granting three weeks' annual leave generally in secondary industry, subject to special cases. A period of twenty-one consecutive days' leave would be allowed to employees who had completed twelve months' continuous service by or after 20 November 1963.



Employees in New South Wales in private industry, other than those covered by Federal awards, were granted three weeks' annual leave by an amendment to the Annual Holidays Act passed in 1958. In 1964 the State Government granted its employees four weeks' annual leave effective from 1 January 1964. From 29 September 1964 annual holiday pay for employees covered by provisions of the Annual Holidays Act has been calculated on the basis of the employee's current weekly earnings instead of current award rates.

Following the decision of the Commonwealth Conciliation and Arbitration Commission in 1963 (*see above*) individual Victorian Wages Boards commenced to alter provisions of their determinations to grant employees an extra week of leave. By September 1963 the majority of Boards had included three weeks' annual leave in their determinations.

In June 1963 the Full Bench of the Queensland Industrial Conciliation and Arbitration Commission granted an extra week of annual leave to employees under State awards with twelve months' continuous service on or after 30 November 1963. The decision applied to day-workers and non-continuous shift workers receiving two weeks' leave; continuous shift workers receiving three weeks' leave; and day-workers and shift workers receiving additional leave in lieu of extra payment for working on statutory holidays. The order became effective as from 1 June 1963.

The Full Bench of the South Australian Industrial Court in May 1963 announced an increased standard of annual leave in the State, adopting three weeks as the standard as fixed by the Commonwealth Conciliation and Arbitration Commission (*see above*).

Following a general inquiry concerning Annual Leave and Public Holidays the Western Australian Court of Arbitration in June 1963 adopted three weeks as the new standard for the normal period of annual leave in State awards, with four weeks for seven-day shift workers. The date of operation was the same as that decided by the Commonwealth Conciliation and Arbitration Commission (*see above*). The standard number of public holidays was retained at ten a year.

Following an amendment to the Wages Board Act in 1961, Tasmanian Wages Boards were permitted to grant employees up to three weeks' paid recreational leave. Between June 1962 and early 1963 determinations of Wages Boards were amended to provide for three weeks' annual leave for employees, to operate from 1 January 1963.

### Long service leave

Paid long service leave, i.e. leave granted to workers who remain with the one employer over an extended period of time, has been included in the provisions of Commonwealth and State industrial legislation and industrial awards, and a brief summary is given in the following paragraphs. After fifteen years' continuous employment with the one employer, most employees in Australia are now entitled to at least thirteen weeks' paid long service leave. In all cases the transfer of ownership of a business does not constitute a break in continuity of service with the same employer. Further information is contained in the annual *Labour Report*.

#### Commonwealth

Until May 1964 the Commonwealth Conciliation and Arbitration Commission had not included provisions for long service leave in its awards, and had refrained from determining disputes relating to this subject except in the case of the Northern Territory and the Australian Capital Territory (*see below*). Consequently, until then, the provisions of the various State Acts relating to long service leave applied to workers covered by awards of the Commonwealth.

In May 1964, following hearing of claims for insertion of long service leave provisions in Commonwealth awards, the Full Bench of the Commonwealth Conciliation and Arbitration Commission announced its decision that long service leave entitlement would be calculated on the basis of thirteen weeks for twenty years of unbroken employment, in respect of employment before 11 May 1964 (or, in New South Wales, 1 April 1963), and at the rate of thirteen weeks for fifteen years in respect of service after 11 May 1964 (or, in New South Wales, 1 April 1963). After further periods of ten years, employees would be entitled to an additional *pro rata* period of leave calculated on the same basis. Those employees who completed an unbroken contract of employment of ten years but less than fifteen years, and whose employment was terminated by death or by the employer for any cause other than serious and wilful misconduct, or by the employee on account of illness, incapacity or domestic or other pressing necessity, would be entitled to *pro rata* payment. The rates of payment while on leave would be current award rates which would be subject to basic wage changes and marginal adjustments which occurred during the leave period.

*Australian Territories.* Long service leave codes for employees covered by Northern Territory and Australian Capital Territory awards were originally prescribed on 4 December 1961 by the Commonwealth Conciliation and Arbitration Commission in Presidential Session. The Commission decided that employees should be granted three months' long service leave after twenty years' service with one employer, even if part of this service was outside the Territory. In addition, the Australian

Capital Territory code prescribed that employees presently employed might 'go back for a period of 25 years in regard to the calculation of their present or future entitlement of long service leave'. In December 1964 the Commission amended the majority of awards covering employees in the Northern Territory and the Australian Capital Territory by granting long service leave on the basis of thirteen weeks after fifteen years' service.

*Stevedoring Industry.* The *Stevedoring Industry Act* 1962, which came into force on 19 November 1962, amended the *Stevedoring Industry Act* 1956-1961 by extending the eligibility and qualifying periods of the long service leave provisions of the Act. No changes were made to the entitlement for long service leave, which remained at thirteen weeks after twenty years' qualifying service and six and a half weeks for each subsequent ten years' qualifying service. The *Stevedoring Industry Act* 1966, which operated from 29 October 1966, reduced the qualifying period for thirteen weeks' leave from twenty years to fifteen years.

#### New South Wales

Long service leave was first introduced for the majority of workers by the Industrial Arbitration Act, 1951, which provided such leave for workers under State awards. This Act was replaced by the Long Service Leave Act, 1955, which extended the benefits to any worker within the State. An amendment to the Act in April 1963 provided for three months' long service leave for fifteen years' continuous service with the same employer and proportionate amounts on the same basis after a minimum of five years' service. The Long Service Leave (Metalliferous Mining Industry) Act, 1963 conferred on certain workers in the metalliferous mining industry the right to three months' long service leave after ten years' service. This Act operated from 1 January 1964.

#### Victoria

The *Factories and Shops (Long Service Leave) Act* 1953 first provided for long service leave for workers in Victoria, the provisions of this Act being subsequently incorporated in the Labour and Industry Act. Leave provided for was thirteen weeks for twenty years' continuous service with the same employer. Contributions by employers to retirement schemes were to be taken into consideration in dealing with exemptions from the Act.

An amendment to the Labour and Industry Act in December 1964 granted employees, from 1 January 1965, thirteen weeks' leave after fifteen years' continuous service. Workers who terminated their employment after ten years but less than the qualifying fifteen years would be able to obtain a *pro rata* entitlement subject to the existing special conditions of the Act. Following amendment to the Public Service Act in 1964, public servants became entitled to four and a half months' leave after fifteen years' service instead of six months after twenty years.

#### Queensland

In 1952 the Industrial Conciliation and Arbitration Acts were amended to include long service leave provisions for employees within the jurisdiction of the Industrial Court, and the Acts were amended again in 1955 to extend these provisions to any employee in respect of whose employment there was not in force an award or industrial agreement under the Act and to seasonal workers in sugar mills and meat works. Leave provided for was thirteen weeks for twenty years' continuous service with the same employer.

An amendment to The Industrial Conciliation and Arbitration Acts was passed and assented to in December 1964, granting employees long service leave of thirteen weeks after fifteen years' continuous service. The amendment retained *pro rata* leave entitlement after ten years' service and operated on and from 11 May 1964.

#### South Australia

The Long Service Leave Act, 1967 provides for thirteen calendar weeks' leave after fifteen years' service with the same employer and for eight and two-thirds weeks' leave for each subsequent complete period of ten years' service. After seven and before fifteen completed years of service the worker is entitled on termination of employment to proportionate payment in lieu of leave for the period worked, except in certain specified circumstances. Entitlement for qualifying service prior to January 1966 is to be calculated at the rate of thirteen weeks' leave for twenty years' service, and an employer shall not be required to grant leave until the worker's total entitlement is thirteen weeks.

An employer may be exempted by the Industrial Commission from the leave entitlement provisions of the Act provided that the employees are entitled under some other scheme to long service leave benefits no less favourable than those provided by the Act.

#### Western Australia

The Long Service Leave Act was passed in 1958, but it did not apply to employees whose conditions of work were regulated under the Western Australian Industrial Arbitration Act. The Court of Arbitration of Western Australia in an order dated 1 April 1958 incorporated in most of the awards and agreements within its jurisdiction provisions similar to those in the Long Service Leave Act.

Leave provided for was thirteen weeks for twenty years' continuous service with the same employer. Contributions by employers to retirement schemes can be taken into consideration in dealing with exemptions from the Act.

In September 1964 the Industrial Commission began to amend the long service leave provisions of its awards and industrial agreements to provide for thirteen weeks' leave after fifteen years' service on or from 1 October 1964. *Pro rata* entitlement would accrue after ten years' service. The *Long Service Leave Amendment Act (No. 2) 1964*, introduced in October 1964, was in the same terms as the amendments made by the Commission to the various awards and agreements.

### Tasmania

The Long Service Leave Act, which was passed in 1956, provided for thirteen weeks' leave for twenty years' continuous service with the same employer. Contributions by employers to retirement schemes could be taken into consideration in dealing with exemptions from the Act. An amendment to the Long Service Leave Act, assented to on 17 December 1964, granted thirteen weeks' leave after fifteen years' continuous service. The amendment operated on and from 11 May 1964.

## INDUSTRIAL DISPUTES

Detailed information regarding industrial disputes involving stoppage of work is given in the *Labour Report*. A table showing statistics of industrial disputes for each year from 1913 is contained in the Appendix to *Labour Report* No. 54, 1968 and 1969.

Particulars of all disputes in progress during the year are included in the annual figures, whether the dispute commenced in that year or was in progress at the beginning of the year. Consequently, details of 'the number of disputes' and 'workers involved' in disputes which commenced in any year, and were still in progress during the following year, are included in the figures for both years.

The following table gives, for Australia as a whole, particulars of industrial disputes which were in progress during 1970, classified according to industry groups.

INDUSTRIAL DISPUTES(a): INDUSTRY GROUPS, AUSTRALIA, 1970

Industry group	Number	Workers involved ('000)			Working days lost ('000)	Estimated loss in wages (\$'000)
		Directly	Indirectly (b)	Total		
Agriculture, grazing, etc. . . . .	2	0.3	..	0.3	1.0	11.0
Coal mining . . . . .	191	63.7	..	63.7	178.4	2,235.2
Other mining and quarrying . . . . .	83	20.8	5.6	26.4	76.5	1,236.4
Engineering, metals, vehicles, etc. . . . .	822	335.5	25.6	361.0	625.9	7,880.6
Textiles, clothing and footwear . . . . .	12	5.2	0.4	5.6	18.2	230.5
Food, drink and tobacco . . . . .	314	122.0	14.8	136.7	250.6	2,978.4
Sawmilling, furniture, etc. . . . .	1	2.7	..	2.7	1.5	15.8
Paper, printing, etc. . . . .	33	34.6	*	34.6	68.6	809.7
Other manufacturing . . . . .	219	70.5	3.8	74.3	125.2	1,588.4
Building and construction . . . . .	291	218.0	9.8	227.8	642.6	9,009.7
Railway and tramway services . . . . .	37	65.2	2.8	67.9	49.2	535.0
Road and air transport . . . . .	72	43.5	0.3	43.8	58.3	773.2
Shipping . . . . .	40	4.6	0.1	4.7	12.7	150.8
Stevedoring . . . . .	444	192.0	..	192.0	148.3	1,752.6
Amusement, hotels, personal service, etc. . . . .	42	7.9	0.1	8.0	13.1	153.3
Other industries(c) . . . . .	135	117.7	*	117.8	123.7	1,522.8
<b>Total . . . . .</b>	<b>2,738</b>	<b>1,304.2</b>	<b>63.3</b>	<b>1,367.4</b>	<b>2,393.7</b>	<b>30,883.3</b>

\* Less than 50.

(a) Refers only to disputes involving a stoppage of work of ten man-days or more. (b) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute. (c) Includes communication; finance and property; wholesale and retail trade; public authority (n.e.i.); and community and business services.

A graph on plate 25, page 269 shows, for the years 1958 to 1970, the working days lost as a result of industrial disputes in the main industry groups.

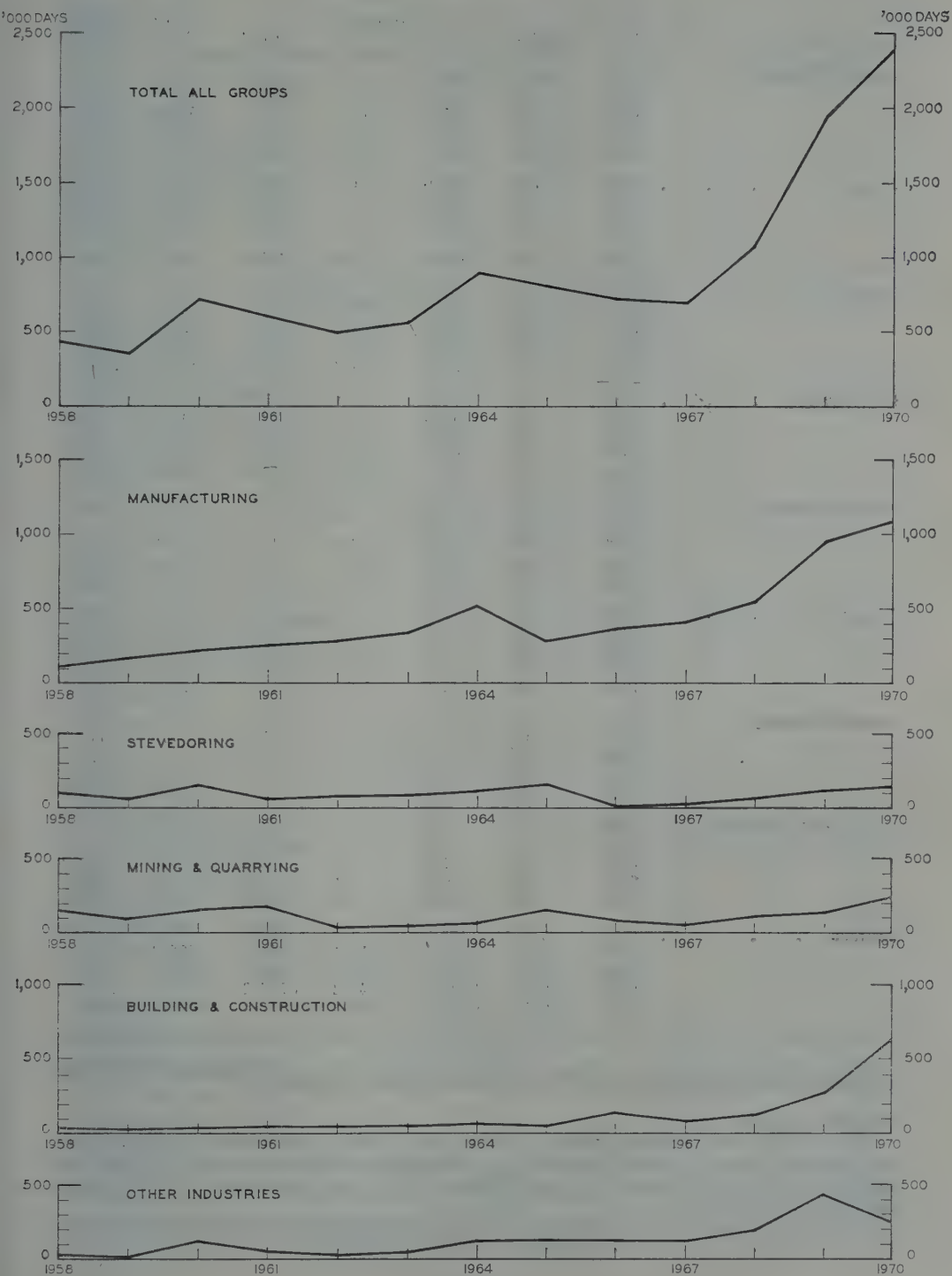
The following table gives particulars of the number of industrial disputes in each State and Territory, together with the number of workers involved and the losses in working days and wages caused by disputes which were current during each of the years 1966 to 1970.



# INDUSTRIAL DISPUTES: AUSTRALIA

1958 TO 1970

WORKING DAYS LOST—INDUSTRY GROUPS



## INDUSTRIAL DISPUTES(a): STATES AND TERRITORIES, 1966 TO 1970

State or Territory	Year	Number	Workers involved ('000)			Working days lost ('000)	Estimated loss in wages (\$'000)
			Directly	Indirectly (b)	Total		
New South Wales	1966	835	203.7	6.3	210.0	400.1	4,026.0
	1967	836	311.2	9.0	320.2	468.0	4,804.6
	1968	965	345.0	10.5	355.5	583.4	6,653.5
	1969	1,133	507.9	13.8	521.7	743.8	8,666.3
	1970	1,484	703.7	36.9	740.6	1,393.6	17,516.5
Victoria	1966	179	99.6	1.9	101.5	219.6	2,097.2
	1967	212	83.2	1.3	84.5	107.3	1,106.6
	1968	327	169.3	3.5	172.8	243.9	2,731.3
	1969	367	336.7	19.8	356.4	717.2	8,619.6
	1970	447	323.9	9.1	333.0	510.8	6,793.7
Queensland	1966	171	67.1	1.6	68.7	80.7	860.8
	1967	159	45.6	0.6	46.3	88.2	886.7
	1968	193	116.7	3.5	120.2	158.6	1,701.2
	1969	253	215.0	3.5	218.5	238.6	2,523.6
	1970	378	153.7	5.2	158.9	179.2	2,413.1
South Australia	1966	42	8.7	0.1	8.8	20.9	199.7
	1967	55	17.4	0.1	17.4	18.7	199.0
	1968	83	38.0	1.4	39.4	51.1	514.6
	1969	72	101.1	1.7	102.8	129.0	1,551.4
	1970	156	48.9	8.1	57.0	93.1	1,123.1
Western Australia	1966	25	2.9	*	2.9	6.2	64.5
	1967	26	5.0	*	5.1	6.0	62.6
	1968	70	18.3	0.4	18.7	21.8	281.8
	1969	104	57.0	2.1	59.1	101.4	1,284.2
	1970	125	44.4	2.1	46.5	141.1	1,963.3
Tasmania	1966	14	2.5	..	2.5	3.1	34.8
	1967	29	6.2	*	6.2	7.3	82.3
	1968	28	7.5	0.3	7.8	13.0	149.0
	1969	44	8.6	0.1	8.7	9.9	115.3
	1970	66	12.8	2.0	14.8	32.2	451.1
Northern Territory	1966	4	0.3	..	0.3	1.2	17.3
	1967	16	2.7	..	2.7	9.1	113.7
	1968	37	3.7	..	3.7	4.6	50.2
	1969	33	8.0	0.2	8.2	8.7	124.8
	1970	62	11.6	*	11.6	27.0	424.4
Australian Capital Territory	1966	3	0.2	..	0.2	0.2	2.2
	1967	7	0.9	..	0.9	0.8	7.5
	1968	10	2.3	..	2.3	3.0	33.7
	1969	8	9.8	*	9.8	9.4	100.6
	1970	20	5.1	*	5.1	16.8	198.2
Australia	1966	1,273	385.0	9.9	394.9	732.1	7,302.5
	1967	1,340	472.2	11.1	483.3	705.3	7,263.1
	1968	1,713	700.8	19.5	720.3	1,079.5	12,115.2
	1969	2,014	1,244.0	41.2	1,285.2	1,958.0	22,985.7
	1970	2,738	1,304.2	63.3	1,367.4	2,393.7	30,883.3

\* Less than 50.

(a) Refers only to disputes involving a stoppage of work of ten man-days or more. (b) Persons thrown out of work at the establishments where the stoppage occurred but not themselves parties to the dispute.

## Duration of disputes

The duration of each industrial dispute involving a loss of work, i.e. the time between the cessation and resumption of work, has been calculated in working days, exclusive of Saturdays, Sundays and holidays, except where the establishment involved carries on a continuous process (e.g. metal smelting and cement manufacture).

The following table shows, for the year 1970, industrial disputes in coal mining, engineering, etc., stevedoring and other industries classified according to duration.

## INDUSTRIAL DISPUTES(a): DURATION, BY INDUSTRY GROUP, AUSTRALIA, 1970

Duration (working days)	Workers involved(b)			Working days lost		Estimated loss in wages (\$'000)
	Number	Number ( <sup>'000</sup> )	Propor- tion of total (per cent)	Number ( <sup>'000</sup> )	Propor- tion of total (per cent)	
COAL MINING						
1 day and less . . . . .	122	38.2	60.0	33.2	18.6	422.6
2 days and more than 1 day . . . . .	35	7.9	12.4	12.2	6.8	171.0
3 days and more than 2 days . . . . .	11	1.2	1.9	2.8	1.6	33.9
Over 3 days and less than 5 days . . . . .	11	2.0	3.1	8.6	4.8	107.3
5 days and less than 10 days . . . . .	9	14.1	22.1	115.7	64.9	1,416.3
10 days and less than 20 days . . . . .	2	0.2	0.3	3.0	1.7	34.5
20 days and less than 40 days . . . . .	1	0.1	0.2	3.0	1.7	49.8
40 days and over . . . . .	..	..	..	..	..	..
Total . . . . .	191	63.7	100.0	178.4	100.0	2,235.2
ENGINEERING, METALS, VEHICLES, ETC.						
1 day and less . . . . .	325	235.3	65.2	121.3	19.4	1,490.3
2 days and more than 1 day . . . . .	145	50.2	13.9	67.3	10.8	842.3
3 days and more than 2 days . . . . .	85	20.8	5.8	53.2	8.5	697.6
Over 3 days and less than 5 days . . . . .	92	25.9	7.2	98.2	15.7	1,242.5
5 days and less than 10 days . . . . .	119	20.1	5.6	143.4	22.9	1,863.5
10 days and less than 20 days . . . . .	46	6.3	1.7	80.3	12.8	988.2
20 days and less than 40 days . . . . .	9	2.4	0.7	60.0	9.6	725.9
40 days and over . . . . .	1	*	..	2.1	0.3	30.4
Total . . . . .	822	361.0	100.0	625.9	100.0	7,880.6
STEVEDORING						
1 day and less . . . . .	377	160.4	83.5	65.5	44.2	801.4
2 days and more than 1 day . . . . .	33	14.9	7.8	22.0	14.8	250.0
3 days and more than 2 days . . . . .	11	4.9	2.6	12.1	8.2	137.7
Over 3 days and less than 5 days . . . . .	11	10.9	5.7	40.5	27.3	457.7
5 days and less than 10 days . . . . .	10	0.7	0.4	5.1	3.4	69.7
10 days and less than 20 days . . . . .	2	0.2	0.1	3.1	2.1	36.1
20 days and less than 40 days . . . . .	..	..	..	..	..	..
40 days and over . . . . .	..	..	..	..	..	..
Total . . . . .	444	192.0	100.0	148.3	100.0	1,752.6
OTHER INDUSTRIES						
1 day and less . . . . .	529	540.8	72.0	345.8	24.0	4,302.8
2 days and more than 1 day . . . . .	252	64.8	8.6	112.0	7.8	1,491.5
3 days and more than 2 days . . . . .	150	62.9	8.4	164.5	11.4	2,153.8
Over 3 days and less than 5 days . . . . .	125	25.1	3.3	133.5	9.3	1,783.7
5 days and less than 10 days . . . . .	159	30.6	4.1	202.3	14.0	2,566.8
10 days and less than 20 days . . . . .	49	19.7	2.6	313.4	21.7	4,202.9
20 days and less than 40 days . . . . .	15	6.7	0.9	166.5	11.6	2,436.5
40 days and over . . . . .	2	0.1	..	3.2	0.2	77.0
Total . . . . .	1,281	750.6	100.0	1,441.1	100.0	19,015.0
ALL INDUSTRIES						
1 day and less . . . . .	1,353	974.6	71.3	565.8	23.6	7,017.2
2 days and more than 1 day . . . . .	465	137.9	10.1	213.6	8.9	2,754.8
3 days and more than 2 days . . . . .	257	89.8	6.6	232.6	9.7	3,022.9
Over 3 days and less than 5 days . . . . .	239	63.8	4.7	280.8	11.7	3,591.1
5 days and less than 10 days . . . . .	297	65.5	4.8	466.5	19.5	5,916.2
10 days and less than 20 days . . . . .	99	26.5	1.9	399.7	16.7	5,261.6
20 days and less than 40 days . . . . .	25	9.2	0.7	229.5	9.6	3,212.2
40 days and over . . . . .	3	0.1	..	5.3	0.2	107.5
Grand Total . . . . .	2,738	1,367.4	100.0	2,393.7	100.0	30,883.3

\* Less than 50.

(a) Refers only to disputes involving a stoppage of work of ten man-days or more. involved. See footnote (b) to table on page 268.

(b) Includes workers indirectly



## Causes of disputes

In the following table causes of industrial disputes are analysed in four industry groups and grouped under the following headings.

*Wages*—claims involving general principles relating to wages, including combined claims relating to wages, hours or conditions of work. *Hours of work*—claims involving general principles relating to hours of work. *Leave, pensions, compensation provisions, etc.*—claims involving general principles relating to these provisions. *Managerial policy*—disputes concerning managerial policy of employers including computation of wages, hours, leave, etc. in individual cases; docking pay, etc.; dismissals, etc.; principles of promotion, etc.; employment of particular persons and personal disagreements; production limitations, etc. *Physical working conditions*—disputes concerning physical working conditions including safety issues; protective clothing and equipment, etc.; amenities; shortage of, or condition of, equipment or material; new production methods, etc.; arduous physical tasks, etc. *Trade unionism*—disputes concerning employment of non-unionists; inter-union and intra-union disputes; sympathy stoppages; recognition of union activities, etc. *Other*—disputes concerning protests directed against persons or situations other than those dealing with employer-employee relationship; non-award public holidays; accidents and funerals; no reason given for stoppage, etc.

For more information concerning these classifications of causes see the statistical bulletin, *Industrial Disputes*, December Quarter 1970 (Reference No. 6.6).

## INDUSTRIAL DISPUTES(a): CAUSES, INDUSTRY GROUPS, AUSTRALIA, 1970

Cause of dispute	Coal mining	Engineer- ing, metals, vehicles, etc.	Steve- doring	Other industries	All industries
<b>Number of disputes—</b>					
Wages . . . . .	33	416	65	654	1,168
Hours of work . . . . .	10	2	1	10	23
Leave, pensions and compensation provisions, etc.	3	11	5	18	37
Managerial policy . . . . .	55	220	162	348	785
Physical working conditions . . . . .	39	69	125	151	384
Trade unionism . . . . .	33	97	42	80	252
Other . . . . .	18	7	44	20	89
<i>Total disputes</i> . . . . .	191	822	444	1,281	2,738
<b>Workers involved(b) ('000)—</b>					
Wages . . . . .	5.6	118.9	52.3	328.9	505.8
Hours of work . . . . .	20.3	0.1	0.1	14.3	34.8
Leave, pensions and compensation provisions, etc.	3.9	8.0	1.6	63.2	76.6
Managerial policy . . . . .	7.9	45.8	52.5	78.6	184.8
Physical working conditions . . . . .	7.8	13.0	26.5	26.6	74.0
Trade unionism . . . . .	7.3	26.7	9.8	15.1	58.9
Other . . . . .	10.9	148.5	49.3	223.9	432.6
<i>Total workers involved</i> . . . . .	63.7	361.0	192.0	750.6	1,367.4
<b>Working days lost ('000)—</b>					
Wages . . . . .	21.7	398.5	85.2	1,018.9	1,524.4
Hours of work . . . . .	105.3	0.3	*	15.7	121.4
Leave, pensions and compensation provisions, etc.	3.6	5.6	1.5	62.0	72.7
Managerial policy . . . . .	16.4	81.3	23.7	165.3	286.7
Physical working conditions . . . . .	12.2	34.1	11.1	51.7	109.1
Trade unionism . . . . .	11.3	40.6	10.7	28.7	91.2
Other . . . . .	8.0	65.4	16.1	98.8	188.2
<i>Total working days lost</i> . . . . .	178.4	625.9	148.3	1,441.1	2,393.7

\* Less than 50.

(a) Refers only to disputes involving a stoppage of work of ten man-days or more. See footnote (b) to table on page 268.

(b) Includes workers indirectly involved.

## Methods of settlement of disputes

The following table shows particulars of industrial disputes for 1970, classified according to method of settlement, in four industry groups.

**INDUSTRIAL DISPUTES(a): METHODS OF SETTLEMENT, INDUSTRY GROUPS  
AUSTRALIA, 1970**

<i>Method of settlement</i>	<i>Coal mining</i>	<i>Engin- eering, metals, vehicles, etc.</i>	<i>Steve- doring</i>	<i>Other industries</i>	<i>All industries</i>
<b>NUMBER OF DISPUTES</b>					
Private negotiation . . . . .	34	256	45	386	721
Mediation not based on legislation . . . . .	..	4	1	15	20
State legislation—					
Under State Conciliation, etc. legislation . . . . .	1	37	1	139	178
Reference to State Government officials . . . . .	..	..	..	..	..
Commonwealth and Commonwealth-State legislation—					
Industrial Tribunals under—					
Conciliation and Arbitration Act . . . . .	2	86	4	94	186
Coal Industry Acts . . . . .	11	..	..	..	11
Stevedoring Industry Act . . . . .	..	..	..	..	..
Other Acts . . . . .	..	..	..	..	..
Reference to Commonwealth Government officials . . . . .	..	..	..	..	..
Filling places of workers on strike or locked out . . . . .	..	..	..	..	..
Closing down establishment permanently . . . . .	..	..	..	..	..
Resumption without negotiation . . . . .	143	439	393	647	1,622
Other methods . . . . .	..	..	..	..	..
<b>Total . . . . .</b>	<b>191</b>	<b>822</b>	<b>444</b>	<b>1,281</b>	<b>2,738</b>

**WORKERS INVOLVED(b)('000)**

Private negotiation . . . . .	17.2	40.8	11.8	128.0	197.8
Mediation not based on legislation . . . . .	..	0.3	*	2.2	2.5
State legislation—					
Under State Conciliation, etc. legislation . . . . .	*	5.0	*	19.6	24.6
Reference to State Government officials . . . . .	..	..	..	..	..
Commonwealth and Commonwealth-State legislation—					
Industrial Tribunals under—					
Conciliation and Arbitration Act . . . . .	0.3	21.5	0.5	29.5	51.7
Coal Industry Acts . . . . .	2.2	..	..	..	2.2
Stevedoring Industry Act . . . . .	..	..	..	..	..
Other Acts . . . . .	..	..	..	..	..
Reference to Commonwealth Government officials . . . . .	..	..	..	..	..
Filling places of workers on strike or locked out . . . . .	..	..	..	..	..
Closing down establishment permanently . . . . .	..	..	..	..	..
Resumption without negotiation . . . . .	44.0	293.5	179.7	571.5	1,088.7
Other methods . . . . .	..	..	..	..	..
<b>Total . . . . .</b>	<b>63.7</b>	<b>361.0</b>	<b>192.0</b>	<b>750.6</b>	<b>1,367.4</b>

For footnotes see next page.

**INDUSTRIAL DISPUTES(a): METHODS OF SETTLEMENT, INDUSTRY GROUPS  
AUSTRALIA, 1970—continued**

<i>Method of settlement</i>	<i>Coal mining</i>	<i>Engi- neering, metals, vehicles, etc.</i>	<i>Steve- doring</i>	<i>Other industries</i>	<i>All industries</i>
<b>WORKING DAYS LOST('000)</b>					
Private negotiation . . . . .	108.5	157.5	9.9	379.3	655.1
Mediation not based on legislation . . . . .	..	1.3	0.1	17.3	18.7
State legislation—					
Under State Conciliation, etc. legislation . . . . .	*	41.6	0.2	100.3	142.0
Reference to State Government officials . . . . .	..	..	..	..	..
Commonwealth and Commonwealth-State legislation—					
Industrial Tribunals under—					
Conciliation and Arbitration Act . . . . .	1.2	140.9	2.3	233.8	378.2
Coal Industry Acts . . . . .	7.9	..	..	..	7.9
Stevedoring Industry Act . . . . .	..	..	..	..	..
Other Acts . . . . .	..	..	..	..	..
Reference to Commonwealth Government officials . . . . .	..	..	..	..	..
Filling places of workers on strike or locked out . . . . .	..	..	..	..	..
Closing down establishment permanently . . . . .	..	..	..	..	..
Resumption without negotiation . . . . .	60.8	284.6	135.8	710.5	1,191.7
Other methods . . . . .	..	..	..	..	..
<b>Total . . . . .</b>	<b>178.4</b>	<b>625.9</b>	<b>148.3</b>	<b>1,441.1</b>	<b>2,393.7</b>

\* Less than 50.

(a) Refers only to disputes involving a stoppage of work of ten man-days or more. See footnote (b) to table on page 268.

(b) Includes workers indirectly involved.

## WORKERS' COMPENSATION LEGISLATION

A conspectus of the principal provisions of Workers' Compensation Acts and Ordinances in force in Australia at 31 December 1969 is included in *Labour Report* No. 54, pages 232–43.

## LABOUR ORGANISATIONS

### Labour organisations in Australia

The figures shown in this section are prepared from a special collection of membership of labour organisations at 31 December each year. The affairs of single unions are not disclosed in the published results and this has assisted in securing complete information. The Bureau is indebted to the secretaries of trade unions for their co-operation in supplying information. More detailed statistics appear in the annual *Labour Report*.

#### Trade unions

The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organisation, which, in its turn, may be a branch of an international body. Broadly speaking, there are four distinct classes of labour organisations: (a) the local independent, (b) the State, (c) the interstate, and (d) the Australasian or international; but a number of variations occur from each of these classes. The schemes of organisation of interstate or federated unions vary greatly in character. In some unions the State organisations are bound together under a system of unification with centralised control, while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes. Statistics relating to interstate or federated trade unions are shown in a table on page 276.

Returns showing membership by States and Territories at 31 December each year are obtained for all trade unions and employee organisations. The following table shows the position at the end of each of the years 1968 to 1970.



**TRADE UNIONS: NUMBER AND MEMBERSHIP, STATES AND TERRITORIES  
DECEMBER 1968 TO 1970**

State or Territory	Number of separate unions			Number of members ( <sup>0</sup> 000)			Percentage increase in membership(a)		
	1968	1969	1970	1968	1969	1970	1968	1969	1970
New South Wales . . . . .	210	210	208	861.5	884.8	912.3	3.4	2.7	3.1
Victoria . . . . .	153	152	156	550.7	559.8	591.5	1.0	1.7	5.7
Queensland . . . . .	135	135	139	334.1	336.4	330.2	-2.9	0.7	-1.8
South Australia . . . . .	133	135	137	185.6	194.2	202.7	1.9	4.6	4.4
Western Australia . . . . .	157	153	155	160.9	162.2	168.6	5.7	0.8	4.0
Tasmania . . . . .	112	112	114	68.2	69.9	73.9	0.2	2.4	5.8
Northern Territory(b) . . . . .	40	43	45	5.6	5.9	6.6	(b)	(b)	(b)
Australian Capital Territory(b) . . . . .	70	70	82	24.1	26.0	28.8	(b)	(b)	(b)
Australia . . . . .	(c) 319	(c) 309	(c) 305	2,190.7	2,239.1	2,314.6	1.8	2.2	3.4

(a) On preceding year. (b) Some unions in the Territories are affiliated with State organisations and their membership is reported under the heading of that State. More accurate reporting of membership by location over the years is reflected in the annual figures for the Territories and this affects their comparability over time. (c) Without interstate duplication *see* below.

Minus sign (—) denotes decrease.

In the preceding table, under the heading 'Number of separate unions', a union reporting members in a State or Territory is counted as one union within that State or Territory. The figures do not add to the Australian total (shown in the last line) because a union represented in more than one State or Territory is included in the figure for each State or Territory in which it is represented, but is counted only once in the Australian total.

A table showing the number and membership of trade unions in Australia for the years 1912 to 1969 is included in Appendix XVI to *Labour Report* No. 54.

The following table shows the number of unions and members thereof in Australia at the end of each of the years 1968 to 1970 classified according to industry group. The table does not supply a precise classification of trade unions and their members by industry, because where the members of a union are employed in a number of industries they have been classified to the predominant industry for the union concerned. Comparability between years of membership figures for an industry group may be affected by amalgamation of trade unions classified to different industry groups.

**TRADE UNIONS: INDUSTRY GROUPS, AUSTRALIA, DECEMBER 1968 TO 1970**

Industry group	1968		1969		1970	
	No. of unions	No. of members	No. of unions	No. of members	No. of unions	No. of members
	(a)	(a)	(a)	(a)	(a)	(a)
		'000		'000		'000
Agriculture, grazing, etc. . . . .	3	58.5	3	58.3	3	55.4
Mining and quarrying . . . . .	12	34.5	12	34.2	12	35.3
Manufacturing—						
Engineering, metals, vehicles, etc. . . . .	9	352.4	9	363.3	9	389.3
Textiles, clothing and footwear . . . . .	5	107.3	5	99.9	5	101.7
Food, drink and tobacco . . . . .	31	125.9	28	134.3	27	143.1
Sawmilling, furniture, etc. . . . .	6	34.7	6	32.8	6	32.1
Paper, printing, etc. . . . .	5	59.2	5	59.9	5	61.7
Other manufacturing . . . . .	22	87.6	22	90.4	21	91.8
All manufacturing groups . . . . .	78	767.1	75	780.5	73	819.6
Building and construction . . . . .	23	145.5	20	139.1	20	135.1
Railway and tramway services . . . . .	22	124.3	22	123.7	21	122.2
Road and air transport . . . . .	11	77.5	12	80.4	13	84.1
Shipping and stevedoring . . . . .	13	32.0	12	30.6	12	31.1
Banking, insurance and clerical . . . . .	15	147.0	14	149.0	13	153.2
Wholesale and retail trade . . . . .	11	89.7	11	88.3	11	86.7
Public administration(b) . . . . .	71	436.6	69	457.2	70	475.6
Amusement, hotels, personal service, etc. . . . .	21	58.6	21	62.4	21	64.3
Other industries(c) . . . . .	39	219.3	38	235.3	36	252.0
Total . . . . .	319	2,190.7	309	2,239.1	305	2,314.6

(a) Without interstate duplication. *See* text above.

(b) Includes communication, municipal, etc.

(c) Includes community and business services.

*Number of trade union members and proportion of wage and salary earners.* The following table shows the approximate percentages of wage and salary earners in employment who are members of trade unions. The estimates of total wage and salary earners have been obtained by adding the number of employees in agriculture and in private domestic service recorded at the June 1966 population census to the estimates of employees in all other industries at the end of each year. For this reason, and also because the membership of trade unions includes some persons not in employment, the percentages shown in the table are approximations. In comparing the percentages shown in this table with those shown in the previous issues of the Year Book, allowance should be made for the fact that the present estimates are based on a new series of employment estimates as from June 1966 see Chapter 21, Employment and Unemployment. The change is of most significance for female employees as the new employment estimates include a considerable number of part-time employees who had previously been excluded.

**TRADE UNIONS: NUMBER OF MEMBERS AND PROPORTION OF  
TOTAL WAGE AND SALARY EARNERS, AUSTRALIA, 1966 TO 1970**

End of December—	Number of members (‘000)			Proportion of total wage and salary earners(a) (Per cent)		
	Males	Females	Persons	Males	Females	Persons
1966 . . .	1,657.5	466.0	2,123.5	60	37	53
1967 . . .	1,663.7	487.6	2,151.3	59	37	52
1968 . . .	1,691.1	499.5	2,190.7	59	36	51
1969 . . .	1,717.5	521.6	2,239.1	58	36	50
1970 . . .	1,750.6	564.1	2,314.6	57	36	50

(a) See text above.

*Interstate or federated trade unions.* The following table gives particulars of the number and membership of interstate or federated trade unions in 1970.

**INTERSTATE OR FEDERATED TRADE UNIONS(a): AUSTRALIA, DECEMBER 1970**

	Unions operating in—					Total
	2 States	3 States	4 States	5 States	6 States	
Number of unions . . . . .	11	7	17	27	85	147
„ „ members (‘000) . . . . .	21.8	23.9	97.1	382.6	1,595.4	2,120.8

(a) Certain unions in this group have, in addition to branches in the States, branches in the Northern Territory or the Australian Capital Territory or both.

**Organisations registered under the (Commonwealth) Conciliation and Arbitration Act**

Under Part VIII of the *Conciliation and Arbitration Act* 1904-1970 any association of employers in an industry who have, or any employer who has, employed, on an average taken per month, not less than 100 employees during the six months preceding application for registration, and any association of not less than 100 employees in any industry, may be registered. However, the Public Service Arbitration Act provides that an association of less than 100 employees may be registered as an organisation under the Conciliation and Arbitration Act if its members comprise at least three-fifths of all persons engaged in that industry in the Public Service. Such organisations are included in the following figures. Registered unions include both interstate associations and associations operating within one State only. Registration under Commonwealth legislation began in 1906. At the end of 1970 the number of employers' organisations registered under the provisions of the Act was 75. The number of unions registered at the end of 1970 was 153, with membership of 1,939,860, representing 85 per cent of the total membership of all trade unions in Australia. Lists of organisations of employees and of employers registered under this Act are contained in the *Industrial Information Bulletin*, Vol. 26, No. 1, January 1971 published by the Department of Labour and National Service.

**Central labour organisations**

*Trades and Labour Councils.* Delegate organisations, usually known as Trades Hall Councils or Labour Councils and consisting of representatives of a number of trade unions, have been established in the capital cities and in a number of other centres in each State. In the centres where these councils

exist most unions or local branches operating in the district are affiliated. The district councils obtain their finance by means of a *per capita* tax on members of affiliated unions. In States other than Western Australia the district councils are generally independent bodies, although provision usually exists in the rules of the central council in the capital city for the organisation of district councils, or for their representation on the central council. Since 1962 in Western Australia separate Trades and Labour Councils, with provincial councils, have been established outside the framework of the Australian Labor Party. At the end of 1963 only the central council (the Trades and Labour Council of Western Australia) was operating, but a number of provincial councils were established from 1964.

The following table shows, for each State and Territory, the number of trades and labour councils and the number of affiliated unions or branches of unions at the end of 1970. The figures for the number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated with the local trades councils in the several towns in which they are represented.

CENTRAL LABOUR ORGANISATIONS: NUMBER, AND UNIONS AND BRANCH UNIONS  
AFFILIATED, STATES AND TERRITORIES, DECEMBER 1970

	N.S.W.	Vic.	Qld	S.A.	W.A. (a)	Tas.	N.T.	A.C.T.	Total
Number of councils .	10	9	13	5	3	2	..	1	43
Number of unions and branch unions affiliated .	320	274	191	151	127	99	..	22	1,184

(a) See explanation in text above.

As well as trades and labour councils there are councils organised on trade lines and composed of delegates from separate unions whose members' interests are closely connected by reason of their occupations. Delegate councils of bakers, bread carters and mill employees, or of unions connected directly or indirectly with the metal trades, or with the building trades, are examples of such organisations.

*Australian Council of Trade Unions.* A central labour organisation, now called the Australian Council of Trade Unions, came into being during 1927. The Council was created to function on behalf of the trade unions of Australia, and was founded at an All-Australian Trade Union Congress held in Melbourne in May 1927. The A.C.T.U. consists of affiliated unions and approved State Trades and Labour Councils and Provincial Councils. The State Trades and Labour Council in each State is the State Branch of the A.C.T.U. and it has the right to appoint one representative to act on the executive of the Council. In addition to the four A.C.T.U. officers and representatives of the State Branches of the A.C.T.U., seven delegates are elected by and from Congress, one from each, of the following industry groups: Building, Food and distributing services, Manufacturing, Metal Services, Transport, and the A.W.U. group. The President and Secretary are full-time officials and, with the two Vice-Presidents, are elected by and from the Australian Congress of Trade Unions.

The ordinary meetings of Congress are held in alternate years. The 1969 Biennial Congress was held in September 1969, and was attended by 755 delegates from affiliated organisations, States branches of the A.C.T.U., and provincial councils. Special meetings of Congress are held whenever deemed advisable by decision of the executive, as approved by the majority of its branches, or by resolution supported by unions representing one-third of the total membership of the A.C.T.U.

The objectives of the A.C.T.U. are the socialisation of industry, i.e. production, distribution and exchange, and the utilisation of the resources of Australia for the benefit of the people—ensuring full employment, with rising standards of living, real security, and full cultural opportunities for all. The methods to be adopted are: the closer organisation of the workers by the transformation of the Australian trade union movement from the craft to an industrial basis, by grouping of unions in their respective industries and by the establishment of one union in each industry; the consolidation of the Australian labour movement with the object of unified control, administration, and action; the centralised control of industrial disputes, educational propaganda among unions; and political action to secure satisfactory working-class legislation.

The A.C.T.U. was the first interstate body in Australia with authority to deal with industrial matters of an interstate character affecting the trade union movement generally. It is also the body responsible for submitting to the Commonwealth Government the names of persons suitable for selection as the Australian workers' delegate to the annual International Labour Conference.



*Other.* In addition to the A.C.T.U., other central labour organisations exist. These include the *Australian Council of Salaried and Professional Associations*, the *Council of Commonwealth Public Service Organisations*, and the *Council of Professional Associations*. Details of these councils will be found in *Labour Report* No. 54, pages 253-4.

### International Labour Organisation

The International Labour Organisation (I.L.O.) was established on 11 April 1919 as an autonomous institution associated with the League of Nations. Its original constitution was adopted as Part XIII of the Treaty of Versailles and formed part of other treaties of peace. During the years between its establishment and the outbreak of the 1939-45 War the I.L.O., with headquarters at Geneva, played a leading role in promoting the improvement of labour conditions throughout the world.

In 1940, in order to ensure that the I.L.O. should be able to continue to function freely, a working centre was established at Montreal, Canada. In 1946 the Organisation became the first of the specialised agencies of the United Nations. Under the terms of agreement the United Nations recognises the I.L.O. as a specialised agency having responsibility in the field defined by its constitution, which embraces labour conditions, industrial relations, employment organisations, social security and other aspects of social policy. The Organisation has three basic parts. These are the International Labour Conference, its highest authority, which as a rule meets annually; the Governing Body, its executive council, which usually meets three times each year; and the International Labour Office, which provides the secretariat of the Organisation. The Conference is composed of delegations from the Member States of the Organisation. At the end of 1970 there were 121 Member States, each of which is entitled to be represented by four delegates—two government, one representing employers and one representing workers together with their advisers. Each delegate speaks and votes independently, so that all points of view in each country are fully expressed. The Governing Body consists of the representatives of twenty-four governments and twelve employers' and twelve workers' representatives. Of the twenty-four government representatives, ten are from the ten countries of major industrial importance and fourteen are elected by the remaining governments. These latter fourteen government representatives and the twelve employers' and twelve workers' titular delegates and the deputy members of the three groups are elected by their groups at the Conference every three years. Particulars are given in *Labour Report* No. 54 of the proceedings of International Labour Conferences up to the 52nd Session, held in Geneva in June 1968. For details of I.L.O. conventions ratified by Australia, see *Labour Report* No. 54, pages 257-8.

## CHAPTER 11

### OVERSEAS TRANSACTIONS

This chapter includes statistics of overseas trade, balance of payments, and overseas investment by private investors, but because of limitations of space the statistics are, in the main, restricted to summarised form. For detailed information see the *Annual Bulletin of Overseas Investment, Australia*; and the other annual bulletins *Overseas Trade* (preliminary and final), *Australian Exports*, *Australian Imports*, *Imports Cleared for Home Consumption* (issued in six parts) and the half-yearly bulletin *Balance of Payments*. Preliminary information is available in summary form in the statements *Balance of Payments—Quarterly Summary*, *Overseas Investment—Preliminary Bulletin* (annual), *Australian Overseas Trade—Exports and Imports* (monthly), *Overseas Trade—Exports by Commodity Divisions* (monthly), and *Overseas Trade—Imports by Commodity Divisions* (monthly). Current information is included in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and in more detail in the *Monthly Bulletin of Overseas Trade Statistics*. There are also the following additional mimeographed statements: *Exports of Principal Products of Australian Origin* (monthly), *Imports of Assembled New Motor Cars* (monthly), *Overseas Trade with Major Groups of Countries* (quarterly), *Highlights of Overseas Trade* (quarterly), and *Trade of Australia with Eastern Countries* (annually). Additional unpublished details of exports and imports can be supplied on request.

A subscription service is available from this Bureau to provide for the detailed requirements of individual users of overseas trade statistics. These special periodical returns are obtainable monthly or quarterly and show trade according to items of the Australian Export and Import Commodity Classifications or statistical key code dissections of Australian Customs Tariff items. A nominal charge is made which varies depending on the amount of detail required.

### OVERSEAS TRADE

#### Constitutional provisions and legislation

##### Constitutional provisions

By the Commonwealth of Australia Constitution Act, section 51 (1), the power to make laws with respect to trade and commerce with other countries was conferred on the Commonwealth Parliament. Under section 86 of the Constitution, the collection and control of duties of customs and excise passed to the Executive Government of the Commonwealth on 1 January 1901. Other references to trade and commerce are contained in sections 87 to 95 of the Constitution (*see* pages 17–18).

##### Commonwealth legislation

Commonwealth legislation affecting overseas trade includes: the Customs Act, the Customs Tariff and the Customs Tariff (Dumping and Subsidies) Act. The Customs Act is the administrative Act under which the Department of Customs and Excise operates. The Customs Tariff provides the statutory authority for imposing the actual rates of duty operative from time to time, while the Customs Tariff (Dumping and Subsidies) Act provides protection for Australian industry against various forms of unfair trading.

##### The Customs Tariff

The first Commonwealth Customs Tariff was introduced by Resolution on 8 October 1901, from which date uniform duties came into effect throughout Australia. The Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting preferential treatment to certain imports from countries of the Commonwealth and certain developing countries. Duties are imposed on some goods, generally of a luxury nature, for revenue purposes. Customs collections are a major source of revenue but in its protective character the tariff has an important influence on the Australian economy.

The present tariff provides for general and preferential rates of duty, and its structure is based on the 'Brussels Nomenclature' which has its origins in the Convention on Nomenclature for the Classification of Goods in Customs Tariffs, signed in Brussels on 15 December 1950. Australia has operated a 'Brussels-type' tariff since 1 July 1965.

*Preferential rates.* Preferential rates apply to goods the produce or manufacture of the United Kingdom, Ireland, Canada, New Zealand, Papua, and New Guinea, and certain goods the produce or manufacture of specified countries, provided that such goods comply with the laws in force at the time affecting the grant of preference.

The following are the rules of origin for preference purposes as defined in the Customs Act.

'151.—(1.) For the purposes of this Act and the *Customs Tariff* 1966–1970 (other than section twenty of the last-mentioned Act), goods shall be treated as the produce of a country if they are unmanufactured raw products of the country.

(2.) For the purposes of this Act and the *Customs Tariff* 1966–1970 (other than section twenty or a direction under section thirty-three "c" of the last-mentioned Act), goods shall be treated as the manufacture of a country—

(a) if the goods were wholly manufactured in the country from materials of one or more of the following classes:

- (i) unmanufactured raw products;
- (ii) materials wholly manufactured in the country or in Australia, or in the country and in Australia; and
- (iii) imported materials that the Minister has, in relation to the country, determined, by notice published in the *Gazette*, to be manufactured raw materials; or

(b) if the goods were partly manufactured in the country, the process last performed in the manufacture of the goods was performed in the country and—

- (i) not less than three-quarters, or, in a case where the country is New Zealand, one-half, of the factory or works cost of the goods is represented by the value of labour or materials, or of labour and materials, of the country or of the country and Australia;
- (ii) in a case where the goods are goods of a class or kind not commercially manufactured in Australia, not less than one-quarter of the factory or works cost of the goods is represented by the value of labour or materials, or of labour and materials, of the country or of the country and Australia; or
- (iii) in a case where the country is New Zealand, not less than three-quarters of the factory or works cost of the goods is represented by the value of labour or materials, or of labour and materials, of New Zealand and the United Kingdom or of New Zealand, Australia and the United Kingdom.

(3.) For the purposes of a direction under section thirty-three "c" of the *Customs Tariff* 1966–1970 goods shall be treated as the manufacture of a country if—

(a) the process last performed in the manufacture of the goods was performed in the country; and

(b) not less than one-half of the factory or works cost of the goods is represented by the value of labour or materials, or of labour and materials, of the country or of the country and one or more of the following countries, that is to say, Australia and countries that, at the time the goods are entered for home consumption, are less developed countries, other than a country that, by virtue of a direction under sub-section (2) of section eleven of the *Customs Tariff* 1966–1970 is not to be treated as a less developed country in relation to the class of goods in which the goods are included.

'151A.—(1.) For the purposes of this Act and the *Customs Tariff* 1966–1970 (other than section twenty or a direction under section thirty-three "c" of the last-mentioned Act), goods shall not be treated as the produce or manufacture of the United Kingdom, Canada, New Zealand, Ireland, Malawi, Rhodesia, Zambia, the Territory of Papua or the Territory of New Guinea unless they have been shipped from that country to Australia and, except where the Collector is satisfied that the intended destination of the goods when originally shipped from that country was Australia, have not been transhipped.



(2.) The last preceding sub-section does not apply—

- (a) to goods the produce or manufacture of a country other than New Zealand that are imported into Australia from New Zealand; or
- (b) to goods the produce or manufacture of a country other than the Territory of Papua or the Territory of New Guinea that are imported into Australia from the Territory of Papua or the Territory of New Guinea.

(3.) For the purposes of a direction under section thirty-three "c" of the *Customs Tariff* 1966–1970, goods shall not be treated as the produce or manufacture of a country unless they have been shipped from that country to Australia and, except where the Collector is satisfied that the intended destination of the goods when originally shipped from that country was Australia, have not been transhipped.

(4.) For the purposes of this section—

- (a) goods may be treated as having been shipped from the Territory of Papua or the Territory of New Guinea if they have been shipped from either of those territories; and
- (b) goods may be treated as having been shipped from Malawi, Rhodesia or Zambia if they have been shipped from any of those countries or from Lourenco Marques or Beira in Mozambique.

*Declared preference countries, Customs Tariff.* 10.—(1.) The Minister may, by order published in the *Gazette*, declare that a country specified in the order is a declared preference country for the purposes of this Act.

(2.) An order under the last preceding sub-section has effect, or shall be deemed to have had effect, from and including such date (which may be a date earlier than the date of publication of the order in the *Gazette*) as is specified in the order.

(3.) The Minister may, by order published in the *Gazette*, revoke an order under sub-section (1.) of this section.

(4.) An order under the last preceding sub-section has effect from and including such date (which shall not be a date earlier than the date of publication of the order in the *Gazette*) as is specified in the order.

(5.) Goods shall not be treated as the produce or manufacture of a declared preference country for the purposes of this Act unless, at the time the goods are entered for home consumption, the order under sub-section (1.) of this section in which the declared preference country is specified has effect or is deemed to have had effect.

Declared preference countries comprise:

Bahamas	Ghana	Mauritius and Dependencies
Barbados	Gibraltar	Nigeria, Federation of
Bermuda	Gilbert and Ellice Islands Colony	St Helena
British Honduras	Guyana, Republic of	Seychelles
British Solomon Islands Protectorate	Hong Kong	Sierra Leone
Brunei	Jamaica	Singapore, Republic of
Ceylon	Kenya	Tanzania
Cyprus	Leeward Islands	Tonga
Falkland Islands and Dependencies	Malaysia	Trinidad and Tobago
Fiji	Maldives Islands	Uganda
Gambia	Malta	Virgin Islands, British
		Windward Islands

*General rates.* General rates apply to goods from all countries which do not qualify for preferential rates of duty under a particular tariff classification.

*By-law provisions.* Customs By-laws and Ministerial Determinations are instruments made by the Minister for Customs and Excise under the authority of sections 271 to 273D of the Customs Act by which goods may be admitted free of duty or at rates of duty lower than those normally applicable. By-laws and determinations may only be made under a by-law classification, which is a tariff classification containing the words 'as prescribed by by-law'. Such a classification sets out the by-law duty rates which will apply to goods only when such goods are included in a by-law or determination made under that classification. A prerequisite for by-law admission is that suitably equivalent goods be not reasonably available from Australian production. A by-law covers goods by general description with no limit on quantity and may be used by any importer of the goods. A determination generally covers a specific quantity of particular goods and may be used only by the importer mentioned in the determination.

*Primage duties.* In addition to the ordinary duties of customs imposed by the Customs Tariff, *ad valorem* primage duties at rates of five per cent or ten per cent are charged on some goods according to the types of goods and origin thereof. Other goods are exempt from primage duty. Goods the produce or manufacture of New Zealand, Norfolk Island, Fiji, Cocos (Keeling) Islands, Christmas Island, Papua, and New Guinea are exempt from primage duty.

*Anti-dumping duties.* The *Customs Tariff (Dumping and Subsidies) Act 1961-1965* provides protection for Australian industry against various forms of unfair trading. Under this Act dumping duty may be imposed on goods that are sold to Australian importers at a price which is less than the normal value of the goods, where this causes or threatens not insubstantial injury to an Australian industry. 'Normal value' under the Act means:

- (a) fair market value in the country of export;
- (b) price in the country of export to a third country;
- (c) fair market value in a third country; or
- (d) cost of production, plus f.o.b. charges, plus selling costs and profit.

The amount of dumping duty is the difference between the normal value and f.o.b. export price.

Countervailing duty may be levied on goods in respect of which any subsidy, bounty, reduction or remission of freight, or other financial assistance has been, or is being, paid or granted directly or indirectly upon the production, manufacture, carriage or export of those goods. The amount of the countervailing duty in respect of any goods is a sum equal to the amount of the subsidy, bounty, reduction or remission of freight or other financial assistance.

#### **Import controls—Customs (Import Licensing) Regulations**

A comprehensive system of import licensing was introduced in Australia at the beginning of the second World War under the authority of the Customs (Import Licensing) Regulations. Following the gradual relaxation of the restrictions from the end of the War, import licensing was reimposed on 8 March 1952 and continued in force until 18 October 1962. From that date restrictions were removed from all commodities with the exception of some goods retained under control for reasons associated with the protection of Australian industry. Further information on import controls is given in Year Book No. 51, page 492.

#### **Export controls and incentives**

*Export restrictions.* Section 112 of the Customs Act provides that the Governor-General may, by regulation, prohibit the exportation of goods from Australia and that this power may be exercised by: (a) prohibiting the exportation of goods absolutely; (b) prohibiting the exportation of goods to a specified place; and (c) prohibiting the exportation of goods unless prescribed conditions or restrictions are complied with. Goods subject to this export control are listed in the Customs (Prohibited Exports) Regulations.

*Exchange control—Banking Act 1959-1967.* As an integral part of the framework of exchange control, a control over goods exported from Australia is maintained under the provisions of Part III of the Banking (Foreign Exchange) Regulations, to ensure that the full proceeds of such goods are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Reserve Bank of Australia. This action is complementary to that taken under other parts of the Banking (Foreign Exchange) Regulations and under Part IV of the Banking Act to control the movement out of Australia of capital in the form of securities, currency and gold.

Export licences are issued subject to terms and conditions specified in the Banking (Foreign Exchange) Regulations, and may be subject to such further terms and conditions as are determined, or may be free from terms and conditions. On the receipt in Australia by the Reserve Bank, or by a bank acting as agent for that Bank, of advice that the foreign currency has been paid to the Reserve Bank or to an agent of the Bank in payment for goods exported in accordance with a licence granted under the regulations, the Bank, or an agent of the Bank, pays the licensee, or such other person as is entitled to receive it, an amount in Australian currency equivalent to the foreign currency received. In addition to commercial transactions involving exports, movements of personal effects are also controlled. Persons leaving Australia for overseas are required to obtain licences to cover their bonafide baggage, personal effects and household effects in any individual case where the gold content thereof exceeds \$1,000, or where jewellery and other articles of high intrinsic worth either exceed \$10,000 in value or those goods have not been the personal property of the passenger for at least twelve months.

**Export incentives.** The Commonwealth Government provides taxation concessions as financial incentives to export. A special income tax allowance for export market development expenditure is designed to encourage firms to incur promotion expenditure in advance of export sales and to assist exporters and potential exporters to expand sales in the existing markets and to enter new overseas markets. The allowance is in the form of a special deduction equal and additional to the ordinary deduction allowable in respect of specified expenses. Rebates of pay-roll tax are also granted to employers whose export sales of goods or property rights have increased above their average annual level in a base period. The rebate is available in the first place to employers who are producers for export, but a producer for export may issue an export certificate to an employer who has supplied components embodied in the final product.

### Trade descriptions

*The Commerce (Trade Descriptions) Act* 1905–1966 gives power to require the application of a proper trade description to certain prescribed goods imported into or exported from Australia. Goods which must bear a prescribed trade description upon importation into Australia are specified in the Commerce (Imports) Regulations. As regards exports from Australia, marking requirements are prescribed in regulations issued under the Act and relating to specified export commodities.

## Government authorities

### Tariff Board

*The Tariff Board Act* 1921–1966 provides for the appointment of a Tariff Board consisting of eight members. Of these, two must, and three may, be members of the Commonwealth Public Service at the time of their appointment (or first appointments in the case of re-appointments). Members of the Board are appointed for terms of not less than one year and not more than five years. The purpose of the Tariff Board is to advise the Government on matters relating to the protection and encouragement of Australian industry.

The Minister of State for Trade and Industry is required to refer to the Board for inquiry and report the following matters; the necessity for new, increased, or reduced duties; the necessity for granting bounties and the effect of existing bounties; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff or by the restriction of the importation of any goods by charging unnecessarily high prices for his goods or acting in restraint of trade. In addition, the Minister may refer the following matters to the Tariff Board for inquiry and report: the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws on the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and other matters affecting the encouragement of primary and secondary industries in relation to the Tariff. The Minister of State for Customs and Excise may refer to the Tariff Board for inquiry and report the following matters: the classification of goods in the Customs Tariff or Excise Tariff and matters in connection with the interpretation of these Tariffs; the question of the value for duty of goods; whether goods not prescribed in departmental by-laws should be so prescribed; and any matters in respect of which action may be taken under the *Customs Tariff (Dumping and Subsidies) Act* 1961–1965.

Where a matter of the necessity for new or increased duties on any goods has been referred to the Board for inquiry and report, the Board may, in its report, recommend the restriction of the importation of those goods for such period as is specified in the report.

Inquiries conducted by the Board relating to a revision of the Tariff, a proposal for a bounty, a question under the Customs Tariff (Dumping and Subsidies) Act, or any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff or by the restriction of the importation of any goods, are held in public, and evidence in such inquiries is taken in public on oath, unless the Board accepts evidence as confidential or in the form of a written statement by a witness on oath. The Board is required to make available to the public the contents of any such written statement except any matter which it accepts as confidential.

### Special Advisory Authority

The Minister for Trade and Industry may also request a Special Advisory Authority to inquire into cases where urgent action appears necessary to protect an Australian industry against import competition pending receipt and consideration of a full report by the Tariff Board. The Special Advisory Authority's report must be submitted to the Minister within thirty days of the making of the request. Temporary protection recommended by a Special Advisory Authority may be imposed, but may only operate for a period of up to three months after the date of receipt of the final report by the Tariff Board on the goods concerned.



## Trade agreements

### Multilateral—General Agreement on Tariffs and Trade

The General Agreement on Tariffs and Trade (G.A.T.T.), which came into force on 1 January 1948, is a multilateral trade treaty designed to facilitate trading relations between participating countries by reducing tariff and other barriers to the free interchange of goods. The Agreement provides a framework within which negotiations can be held to reduce barriers to trade, and a structure for embodying the results of such negotiations in a legal instrument. Features of the Agreement are the schedules of tariff concessions participating countries have negotiated with each other, the application of most-favoured-nation tariff treatment among the participants, the avoidance of other trade discrimination, and a code of agreed commercial policy rules for international trading. Each participating country retains the right (a) to impose new or increased duties for protective purposes, except in respect of particular products where rates of duty have been bound against increase in negotiations under the Agreement; (b) by negotiation to modify or withdraw concessions formerly agreed; (c) to impose import restrictions to protect the balance of payments; (d) to take emergency action where any industry is endangered by reason of any obligation incurred under the Agreement.

There have been six main tariff negotiations under the provisions of the Agreement, and a number of smaller scale negotiations preceding the accession of individual countries. As a result the tariff rates for a great many items entering into world commerce have been reduced and/or bound against increase. Australia has obtained tariff concessions from individual countries on a number of its principal or potential exports to them, as a result both of direct negotiation by Australia and of negotiation by other countries. In the latter case the benefits occurred through the operation under the Agreement of the most-favoured-nation principle. The latest series of trade negotiations, the Kennedy Round, was based on a plan for linear tariff cuts by industrial countries on all industrial products, with a minimum of exceptions, and on the reduction of non-tariff barriers to trade and the creation of acceptable conditions of access to world markets for agricultural products. It concluded in June 1967 after three years of negotiations. Concessions were negotiated on trade valued at over \$36,000 million. The average reductions in tariffs on industrial goods was roughly one-third, while in agriculture the most important item was the agreement reached on the basis for a new world grains arrangement. Overall results were substantial, but were unevenly spread in that efforts to reduce trade barriers were very much more successful for manufactures than for primary products. In the post-Kennedy Round period, therefore, Australia is placing particular emphasis on the work of the Committee on Agriculture, created in November 1967, to examine the problems in the agricultural sector.

Up to the end of 1970 the contracting parties had held twenty-six sessions, nearly all in Geneva, to deal with matters arising from the administration of the Agreement. As a general rule the contracting parties meet once a year, although in a few instances they have met twice. In 1960 a Council of Representatives was established to undertake work, both of an urgent and of a routine character, between the regular sessions of the contracting parties. Some of the provisions of the Agreement were revised in 1954 and 1955. The revised Agreement contains tighter provisions on non-tariff barriers to trade, and allows more freedom for countries to revise individual tariff items which had been bound against an increase in tariff negotiations under the Agreement.

Since G.A.T.T. has not been accepted definitively by any country except Haiti, the Agreement is at present being applied provisionally pursuant to a Protocol of Provisional Application. On 1 January 1971, seventy-eight countries, whose foreign trade represents over eighty per cent of the total volume of world trade, were full contracting parties to the Agreement, one had acceded provisionally, and fourteen applied the Agreement on a *de facto* basis.

Increasing attention has been focused in G.A.T.T. on specific trade and development problems of developing countries, and in February 1965 a new Part IV of G.A.T.T., aimed at helping developing countries solve these problems, was introduced on a *de facto* basis. It entered legally into force in June 1966. The new Part IV embodies commitments to individual and joint action by contracting parties, aimed at ensuring that the developing countries can increasingly find the means to raise standards of living and promote rapid economic development through participating in international trade and achieving sustained growth of their export earnings.

As a means of helping to offset the competitive disadvantages faced by the new industries of the developing countries, and of putting these countries in a better position to compete with major industrial countries in the Australian market, Australia formulated in 1965 a system of tariff preferences for developing countries on a range of manufactured and semi-manufactured products, all of which had been nominated by developing countries as being of export interest to them. It was recognised that Australia's initiative might well give a lead to other countries which might wish to use preferences to assist developing countries, and so lead to a compounding of the benefits to the

developing countries. Before the Australian system could be introduced, it was necessary to obtain a waiver from the G.A.T.T. 'no-new-preference' provisions. Such a waiver was granted at the end of March 1966 and the first preferences for developing countries became effective in April 1966. The Australian system has been extended in scope from time to time and is successfully stimulating imports of the products concerned from developing countries. Features of the system are that it is non-reciprocal (in that Australia seeks nothing in return), that it contains safeguards for Australian industries and for the interests of third countries, and that it is subject to international supervision through the G.A.T.T.

#### Bilateral agreements

*United Kingdom.* The original United Kingdom and Australia Trade Agreement (Ottawa Agreement) was signed on 20 August 1932. The provisions and history of the agreement were published in Year Book No. 43, page 329. A new Trade Agreement designed to replace the original agreement and correct the imbalance in benefits which had emerged in the twenty-five years of its operation came into effect on 9 November 1956. Briefly, this agreement preserves security for Australian exports in the United Kingdom market, but lowers the obligatory margins of preference which Australia extends to the United Kingdom. The agreement provides for re-negotiation after the initial five-year period, but by arrangement between the two Governments this re-negotiation has been postponed. In the meantime the agreement continues subject to six months notice of termination by either country. Further details of the 1956 Agreement may be obtained from Year Book No. 51, page 495.

*Canada.* The existing agreement between Australia and Canada came into force on 30 June 1960, replacing an agreement signed on 3 August 1931. The agreement provides for Australian goods to receive British Preferential Tariff rates, or better, upon entry into Canada, and for Canada to maintain margins of preference in favour of Australia on a range of commodities. The agreement specifies that Canadian goods, with some exceptions, shall receive the benefit of the British Preferential Tariff upon importation into Australia and that Australia shall maintain margins of preference in favour of Canada on a range of commodities. The agreement continues subject to six months notice.

*New Zealand.* The New Zealand-Australia Free Trade Agreement came into force on 1 January 1966. The agreement provides for free trade in certain scheduled goods. Provision is made for the addition of items to the schedule. The provision of the 1933 Trade Agreement between Australia and New Zealand continues in force as part of the Free Trade Agreement, except as superseded or modified by it.

*Rhodesia.* A trade agreement was negotiated with the Federation of Rhodesia and Nyasaland in June 1955. This agreement consisted mainly of an exchange of preferential tariff treatment over a range of items. The Federation was dissolved on 31 December 1963, but application of the Agreement was continued on a provisional basis between Australia and each of the three constituent territories Zambia (Northern Rhodesia), Rhodesia (Southern Rhodesia) and Malawi (Nyasaland). Zambia terminated the Trade Agreement with Australia on 30 June 1966 and the Agreement between Malawi and Australia lapsed on 1 January 1967. Following the unilateral declaration of independence by the Rhodesian Government in November 1965 tariff preferences between Australia and Rhodesia were suspended by both countries. Hence the trade agreement between Australia and Rhodesia is inoperative at the present time.

*Malaysia.* A trade agreement with the then Federation of Malaya became effective in August 1958. Under the agreement Malaya undertook to protect Australian wheat and flour from dumped or subsidised competition and to extend to Australia any tariff preferences it accords. Australia guaranteed free entry for natural rubber so long as the Papua-New Guinea crop was absorbed, and assured the Federation that natural rubber would not be at a disadvantage compared with synthetic rubber in respect of tariff or import licensing treatment. The Agreement continues to apply between Australia and that portion of Malaysia known previously as the Federation of Malaya.

*Japan.* An Agreement on Commerce between the Commonwealth of Australia and Japan was signed on 6 July 1957, and formally ratified on 4 December 1957. It was provided that the Agreement would remain in force until 5 July 1960, and thereafter unless prior notice of termination should be given by either Government. The agreement provides that each country shall extend most-favoured-nation treatment to the other in respect of customs duties and similar charges, and import and export licensing. Japan is not entitled to claim the benefit of preferences accorded by Australia to Commonwealth countries and dependent territories. Japan also gave certain specific commitments on some important Australian export commodities.

Following a review of the agreement, a Protocol of Amendment was signed on 5 August 1963 and formally ratified on 27 May 1964. Under the Protocol Australia agreed to withdraw action against Japan under Article XXXV of the General Agreement on Tariffs and Trade, and thus a full G.A.T.T. relationship was established between the two countries.



The specific undertakings agreed in 1957 have now lapsed and the following commitments have been entered into.

Japan has:

- (a) undertaken not to accord less favourable import treatment (apart from tariff) for raw wool than for raw cotton,
- (b) stated that it has no present intention of imposing a duty on wool,
- (c) undertaken to continue imports of Australian soft wheat at a stabilised level, and to purchase Australian hard wheat\* when necessary requirements are met,
- (d) stated that it will endeavour to expand opportunities for imports into Japan of Australian sugar, canned meat, leather, motor vehicles, butter, and cheese.

Australia has:

- (a) undertaken to consult Japan on temporary protection cases affecting Japanese products (in such consultations Japan will consider whether the need for temporary protection can be obviated by measures taken in Japan),
- (b) stated that equal opportunities of fair and equal competition are accorded to Japanese products in Australian Government purchases overseas.

The new agreement will be effective for three years from the date of ratification and thereafter subject to three months' notice of termination by either Government. There is provision for consultations to take place at least annually.

*Indonesia.* This agreement came into operation on 1 July 1959. It records the desirability of expanding trade between Australia and Indonesia. It also gives special recognition to the importance of the flour trade from Australia to Indonesia. Australia recognises the importance to Indonesia of its traditional exports to Australia. The agreement is subject to review and renewal annually.

*Philippines.* A trade agreement with the Philippines was signed in Manila on 16 June 1965. The agreement provides for an exchange of non-discriminatory treatment† while recognising existing preferences. The agreement is to operate for one year initially and continue thereafter unless one Government gives ninety days' notice of its intention to terminate it. The Philippines is not a member of G.A.T.T.

*U.S.S.R.* A trade agreement between Australia and the U.S.S.R. was signed in Moscow on 15 October 1965. The agreement provides for the exchange of most-favoured-nation tariff treatment between the two countries, while recognising existing preferences. It operates initially for a period of four years and thereafter until cancelled by either party. There is provision for consultation on request about any matter affecting the operation of the agreement.

*Korea.* On 21 September 1965 a trade agreement was signed in Seoul between Australia and South Korea. Basically the agreement provides for an exchange of non-discriminatory treatment with allowances for existing preferences. The agreement, to run for one year with provision for automatic extension, also provides for non-discrimination by State trading enterprises. Both Governments undertake to use their best endeavours to increase the volume of trade between the two countries.

*Poland.* A trade agreement between Australia and Poland was signed in Warsaw on 20 June 1966. The agreement provides for the exchange of most-favoured-nation tariff treatment between the two countries, while recognising existing preferences. It operates initially for a period of four years and thereafter until cancelled by either party. There is provision for consultation on request about any matter affecting the operation of the agreement.

*Bulgaria.* A trade agreement between Australia and Bulgaria was signed in Sofia on 22 June 1966. The agreement provides for the exchange of most-favoured-nation tariff treatment between the two countries, while recognising existing preferences. It operates initially for a period of four years and thereafter until cancelled by either party. There is provision for consultation on request about any matter affecting the operation of the agreement.

*Romania.* A trade agreement between Australia and Romania was signed in Bucharest on 18 May 1967. The agreement provides for the exchange of most-favoured-nation tariff treatment between the two countries, while recognising existing preferences. It operates initially for a period of four years and thereafter until cancelled by either party. There is provision for consultation on request about any matter affecting the operation of the agreement.

\* 'Soft' wheat is fair average quality wheat; 'hard' wheat is premium grade wheat similar to that grown in North America. † An agreement, with reservations, not to discriminate against each other with tariff or non-tariff barriers.



*Hungary.* A trade agreement between Australia and Hungary was signed in Budapest on 5 December 1967. The agreement provides for the exchange of most-favoured-nation tariff treatment between the two countries, while recognising existing preferences. It operates initially for a period of four years and thereafter until cancelled by either party. There is provision for consultation on request about any matter affecting the operation of the agreement.

*Republic of China (Taiwan).* On 22 April 1968 a trade agreement was signed in Canberra between Australia and the Republic of China. The agreement provides for an exchange of most-favoured-nation tariff treatment while recognising existing preferences. The agreement operated for one year initially and continues thereafter unless one government gives ninety days' notice of its intention to terminate it. The Republic of China is not a member of G.A.T.T.

*Yugoslavia.* A trade agreement between Australia and Yugoslavia was signed in Belgrade on 21 July 1970. The agreement provides for exchange of most-favoured-nation tariff treatment between the two countries while recognising existing preferences. The agreement will come into operation upon the exchange of notes by the two countries, and will remain in force until terminated by either party on ninety days' notice. There is provision for consultation on request about any matter affecting the operation of the agreement.

## Trade services

### Trade Commissioner Service

The stimulation of interest abroad in Australia's exports is an important government activity in which the Australian Trade Commissioner Service plays a prominent part. A brief account of the establishment and growth of the Trade Commissioner Service before the Second World War is available in Year Book No. 51, page 496. Since the War the service has increased steadily, and by early 1971 there were 130 Trade Commissioners and Assistant Trade Commissioners in forty-seven posts in thirty-seven countries.

Trade Commissioners are responsible for commercial intelligence in their territories. Particular facilities provided for Australian exporters and export organisations include: surveys of market prospects; advice on selling and advertising methods; arranging introductions with buyers and agents; providing reports on the standing of overseas firms; advice and assistance to business visitors; helping to organise and carry through trade missions, trade displays, newspaper supplements, and other promotion and publicity media; providing information on import duties, import licensing, economic conditions, quarantine and sanitary requirements, and other factors affecting the entry and sale of goods; helping to attract desirable investment.

In some countries Trade Commissioners also participate in inter-governmental negotiations in the economic and commercial fields. In certain countries where there is no diplomatic or consular mission Trade Commissioners are called upon to act as the Australian representative.

Trade Commissioners and Assistant Trade Commissioners are drawn from either private enterprise or the public service, and applications for entry into the Service are invited periodically by public advertisement. Recruitment is generally at the Assistant Trade Commissioner level and persons selected are promoted to Trade Commissioner as experience and performance warrant. In the majority of posts the Trade Commissioner is supported by an Assistant Trade Commissioner.

The Trade Commissioner Service is administered by the Commonwealth Department of Trade and Industry (as distinct from the diplomatic and consular services administered by the Department of Foreign Affairs), but in countries where there is an Australian diplomatic or consular mission it is the practice for Trade Commissioners to be attached to the mission and to hold an appropriate diplomatic or consular rank (Commercial Counsellor, Commercial Secretary or Commercial Attaché).

The overseas trade representation is shown in the chapter International Relations.

### Trade Missions

Since 1954 the Australian Government has sent a number of trade missions abroad as part of the campaign to increase exports. The experience acquired has indicated the need for flexibility in techniques to suit particular products or markets. At present the following types of trade missions are in use.

*Survey missions.* These are organised to obtain precise knowledge about the export trade potential for specific products in an overseas market. Such methods are used to explore export prospects in new or developing areas where commercial intelligence is not readily available or where a complex industry is involved and the industry requires special export knowledge.

*Specialised and general trade missions.* Arrangements are made for specific industries or groups of firms representing a number of industries to participate in a planned selling campaign in overseas markets with known sales potential. The mission visits the market, publicises its products and negotiates sales.

Up to the end of 1970 Australia has sent overseas fifty-two trade and survey missions and five trade ships.

Further details on trade missions are included in Year Book No. 49, page 544.

### Export Payments Insurance Corporation

The Export Payments Insurance Corporation was established by the Commonwealth Government in 1956 with the objective of encouraging exports by providing insurance against risks of non-payment of overseas accounts. The Corporation is charged to be self-supporting, i.e. over a period its income should be adequate to cover the expenses of operation and any payments of claims which may be incurred.

The main risks of loss against which the Corporation insures are the 'commercial' risks of the insolvency or protracted default of the buyer and 'political' risks. The latter include exchange transfer difficulties; the imposition of government regulations which prevent the import of the goods into the buyer's country; war, revolution or civil disturbance in the buyer's country. For most 'political' risks insurance cover is available to a maximum of 90 per cent of the amount of loss in the pre-shipment period and a maximum of 95 per cent in the post-shipment period. The rate of cover for 'commercial' risks is fixed at 90 per cent.

The Corporation may submit to the Government, for consideration in the national interest, applications for payment insurance which are commercially unacceptable to the Corporation. In considering such applications the Government takes account of both political and economic factors.

An amendment to the *Export Payment Insurance Corporation Act 1956* in November 1964 gave E.P.I.C. the authority to issue guarantees of payment to commercial lending institutions on money raised for the purpose of financing exports. The existence of E.P.I.C. guarantees has facilitated the raising of finance by exporters.

In addition to providing the above facilities, the Corporation insures, on behalf of the Commonwealth Government, eligible Australian investments in overseas countries against the main non-commercial risks associated with investing overseas, e.g. expropriation, exchange transfer difficulties, and war damage. For an investment to be eligible it must confer benefits on both Australia and the investment host country. As at 31 December 1970, 68 policies had been written for 17 investments mainly in south-east Asia. The face value of these policies was \$23 million.

Since the first policy was issued in September 1957, Australian exporters have made increasing use of the facilities of E.P.I.C. At 31 December 1970 the Corporation had 845 policies current on its commercial account (i.e. not including Government business) with a face value of over \$397 million. The Corporation has issued policies covering exports to 150 countries and has insured a wide range of Australian exporters.

A Consultative Council, composed of eight leading figures in the fields of banking, commerce, and industry, and two Government members advises the Corporation on its activities. The council meets two or three times a year and is appointed for a term of three years.

Further information on the Corporation is contained in Year Book No. 49, page 544. For particulars of its operations see Chapter 17, Private Finance of this Year Book.

### Collection and presentation of statistics

#### Basic documents

Overseas trade statistics are compiled by the Commonwealth Bureau of Census and Statistics from copies of export and import entries submitted by exporters and importers or their agents to the Department of Customs and Excise as required by the Customs Act. The entries show the port of shipment and country of consignment for exports, and port of entry and country of origin for imports, the date, the description, quantity where required, the value (f.o.b.) of the goods, and for imports, the amount of duty paid thereon. The export statistical item number is inserted by the exporter or his agent; the importer or his agent is required to insert the Tariff item number under which the goods are admitted and the statistical key code. These are verified by officers of the Department of Customs and Excise in the local offices of the Collectors and Sub-collectors of Customs.

### Scope of the statistics

Overseas trade statistics are not confined to goods which are the subject of a commercial transaction and all goods moving into or out of Australia are recorded, except for those exclusions listed below. Among the items included are:

- (a) Exports and imports on government account including some items of defence equipment.
- (b) Outside packages (containers, crates, etc.). These are included as a separate item in the tabulation of imports, but in exports the value recorded for each item includes the value of the outside package.

### Exclusions

- (a) Direct transit trade, i.e. goods being transhipped or moved through Australia for purposes of transport only.
- (b) Bunkers and stores supplied to vessels and aircraft. (However, a separate 'Ships' Stores' collection is made and details are shown on page 309.)
- (c) Those migrants' and passengers' effects for which a customs entry is not received.
- (d) Those parcel post exports and imports of small value for which customs entries are not received.
- (e) Certain materials for intergovernmental defence projects for which customs entries are not required.
- (f) The value of ores and concentrates exported and imported includes the value of the gold content and the gold content is therefore not included in exports and imports of gold.
- (g) Vessels and aircraft engaged in the transport of passengers or goods between Australia and other countries.
- (h) Vessels and aircraft purchased for use on overseas routes and any subsequent sales made of such vessels and aircraft.
- (i) Fish and other sea products landed abroad directly from the high seas by Australian vessels.

### Areas applying

The area to which all overseas trade statistics issued by this Bureau apply is the whole of the Commonwealth of Australia, comprising the States of New South Wales, Victoria, Queensland, South Australia, Western Australia, and Tasmania, the Northern Territory and the Australian Capital Territory. Non-contiguous territories under Australian administration are treated as outside countries and trade transactions between Australia and those non-contiguous territories are part of the overseas trade of Australia. Such transactions are shown separately, i.e. the trade of Australia with each particular area is separately recorded and tabulated.

### Period covered by statistics

*Exports and imports* are recorded statistically in the month in which the entries are passed by the Department of Customs and Excise. Normally this is within a few days of loading or discharge of cargo, although delays sometimes occur in the lodging of entries and shipments are at times delayed by abnormal factors affecting sales deliveries for exports and loading of ships. Because of the distances involved entries from outlying ports are terminated on the 21st of the month. Exports shipped by container from the terminal ports of Sydney, Melbourne and Fremantle are recorded in the same manner as other exports. Entries at the feeder ports of Brisbane and Adelaide are lodged prior to the movement of containers to terminal ports.

*Year of compilation.* Since July 1914, detailed trade statistics have been compiled for financial years (July to June). Prior to that details were compiled on a calendar year basis.

### Valuation

Commencing with the Bureau publications issued at the close of 1965 values in overseas trade statistics have been expressed in \$A. Prior to this values were expressed in £ (Aust.) except for imports into Australia which, up until 15 November 1947, were recorded in British currency values. Full explanatory notes on the methods of recording import values before and since 15 November 1947 were included in Year Book No. 37, page 396.

All values in overseas trade statistics are determined on a 'free on board (f.o.b.) port of shipment' basis. This means that all charges (in particular the cost of freight and insurance) incurred after the goods have been exported from the port of shipment are excluded. Only transport and service charges incurred, or usually incurred, prior to export are included in the determination of trade values.

The procedure adopted to value exports and imports is as follows.

*Exports.* The recorded value of goods exported includes the cost of containers and outside packages and has been determined, since July 1937, as follows.

- (a) Goods sold to overseas buyers before export are valued at the Australian f.o.b. port of shipment equivalent of the actual price at which the goods were sold.



- (b) Goods shipped on consignment are valued at the Australian f.o.b. port of shipment equivalent of the price paid for similar goods of Australian origin in the principal markets of the country to which they are dispatched for sale.

An account of the bases of valuation in operation prior to July 1937 is given on page 396 of Year Book No. 37.

*Imports.* The recorded value of goods imported is the amount on which duty is payable or would be payable if the duty were *ad valorem*. Value for duty of any goods shall be the sum of the following:

- (a) (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction ('special deduction' is defined as any discount or other deduction allowed to the Australian importer which would not ordinarily have been allowed to any and every purchaser at the date of exportation of an equal quantity of identically similar goods); or
- (ii) the current domestic value of the goods ('current domestic value' is defined as the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country); whichever is the higher; and
- (b) all charges payable or ordinarily payable for placing the goods free on board at the port of export.

In the case of goods consigned for sale in Australia the 'Value for duty' shall be the amount which would be the value for duty if the goods were, at the date of exportation, sold to an Australian importer instead of being consigned for sale in Australia.

*Leasing arrangements.* The recorded value of goods exported, or imported under leasing arrangements is defined as the free on board value, i.e. not the value of the lease receipts or payment. However, for balance of payments purposes, large items of equipment under lease are normally excluded from export and import figures and, therefore, from the balance of trade since no change of ownership has occurred.

### Quantity data

Where quantities are shown they are generally, but not invariably, expressed in terms of the normal trade unit. Where 'cental' is used, the unit is equivalent to 100 lb avoirdupois. Quantities are not tabulated in respect of statistical items for which there is no appropriate unit of quantity (for example, a statistical item which covers a number of commodities that cannot be recorded under a uniform unit of quantity).

### Statistical concepts of trade

*Trade systems.* There are two generally accepted systems of recording overseas trade statistics, namely (a) special trade and (b) general trade. The Statistical Office of the United Nations defines the two systems as follows.

'*System of Trade.* Two systems of recording trade are in common use, differing mainly in the way warehoused and re-exported goods are recorded.

- (a) *Special Trade.* Special imports are the combined total of imports directly for domestic consumption (including transformation and repair) and withdrawals from bonded warehouses or free zones for domestic consumption. Special exports comprise exports of national merchandise, namely, goods wholly or partly produced or manufactured in the country, together with exports of nationalised goods. (Nationalised goods are goods which, having been included in special imports, are then exported without transformation.)
- (b) *General Trade.* General imports are the combined total of imports directly for domestic consumption and imports into bonded warehouse or free zone. General exports are the combined total of national exports and re-exports. Re-exports, in the general trade system, consist of the outward movement of nationalised goods plus goods which, after importation, move outward from bonded warehouse or free zone without having been transformed.

*Direct transit trade,* i.e. goods merely being transhipped or moving through the country for purposes of transport only, is excluded from the statistics of both special and general trade.'

Statistics in this volume are compiled on the 'general trade' basis; imports on a 'special trade' basis are published in the bulletin *Imports Cleared for Home Consumption*, issued annually.

Australian produce (national produce) is defined as goods, materials or articles which have been produced, manufactured or partly manufactured in Australia, except goods which were originally imported and have undergone only repair or minor operations which leave them essentially unchanged.

Re-exports are defined as goods, materials or articles originally imported which are exported either in the same condition in which they were imported, or after undergoing repair or minor operations which leave them essentially unchanged. 'Minor operations' include blending, packaging, bottling, cleaning, sorting, husking, and shelling.

*Merchandise and non-merchandise trade.* Total trade is divided into merchandise and non-merchandise trade. Merchandise trade is the equivalent of total exports and imports less certain items specified as non-merchandise. Since July 1965 merchandise and non-merchandise trade have been defined in accordance with international standards recommended by the United Nations. A complete description of the commodities included is contained in the Australian Export and Import Commodity Classifications published by the Bureau of Census and Statistics.

*Balance of trade.* Statistics of the balance of trade for balance of payments purposes are derived by making certain adjustments, relating both to scope and valuation to statistics of merchandise exports and imports. Statistics on the adjusted basis are published in statistical bulletins relating to the balance of payments. The adjustments include the following: imports are adjusted for the overall excess of recorded value for duty over the actual selling price to the importer; exports and imports of goods for repair and return, and the value of repairs are deducted from merchandise trade; exports and imports of ships and aircraft for use on overseas routes, certain imports of defence equipment, and other trade items for which customs entries are not required are added. Adjustments are also made for timing differences between the change of ownership and the lodgment of import entries in the case of certain large items of equipment (e.g. warships).

The balance of trade is derived by comparing statistics of exports on a balance of payments basis with statistics of imports on that basis.

### **Balance of payments**

Estimates of the balance of trade do not, however, measure Australia's total balance of payments which includes other transactions such as freight and insurance charges on imports, shipping expenditure in Australian ports, overseas travel, payments of profits and interest, and private and government borrowing overseas.

### **Country of consignment or origin**

'Country of consignment' referred to in exports tables means the country to which goods were consigned at the time of export. Where the country of consignment is not determined at the time of export the goods are recorded as exported 'For orders'. 'Country of origin' referred to in import tables means the country of production. Classification of imports according to country of shipment was discontinued after the year 1920-21. A brief account of the dual system of import classification by country operating prior to the year 1921-22 is given on page 500 of Year Book No. 51.

Throughout this chapter, countries listed are shown in alphabetical order.

### **Commodity classifications**

From July 1965 imports have been classified according to the Australian Import Commodity Classification and from July 1966 exports have been classified according to the Australian Export Commodity Classification. Prior to those years the statistics were based on the Statistical Classification of Exports and Imports. The new classifications are based on the Standard International Trade Classification, Revised (S.I.T.C.), which is closely related to the Brussels Tariff Nomenclature used in the Australian Customs Tariff introduced in July 1965.

### **Pre-federation records**

In the years preceding federation each State recorded its trade independently and in so doing did not distinguish other Australian States from external countries. The aggregation of the records of the several States is necessarily the only available means of ascertaining the trade of Australia for comparison with later years, but the results obtained are subject to error, since past records of values and the direction of exports and imports were not on uniform lines. Exports and imports for years prior to federation may be found in early issues of the Year Book, particularly Year Book No. 2. On the introduction of the *Customs Act* 1901 the methods of recording values were made uniform throughout the States.

## **Total overseas trade**

The following table shows the total trade of Australia with overseas countries from 1901 to 1969-70. The period 1901 to 1965-66 has been divided into five-year periods, and the figures shown represent the annual averages for the periods specified. Figures for the individual years were published in earlier issues, but figures for imports in issues prior to No. 37 were expressed in British currency.

# OVERSEAS TRADE: AUSTRALIA 1950-51 TO 1969-70

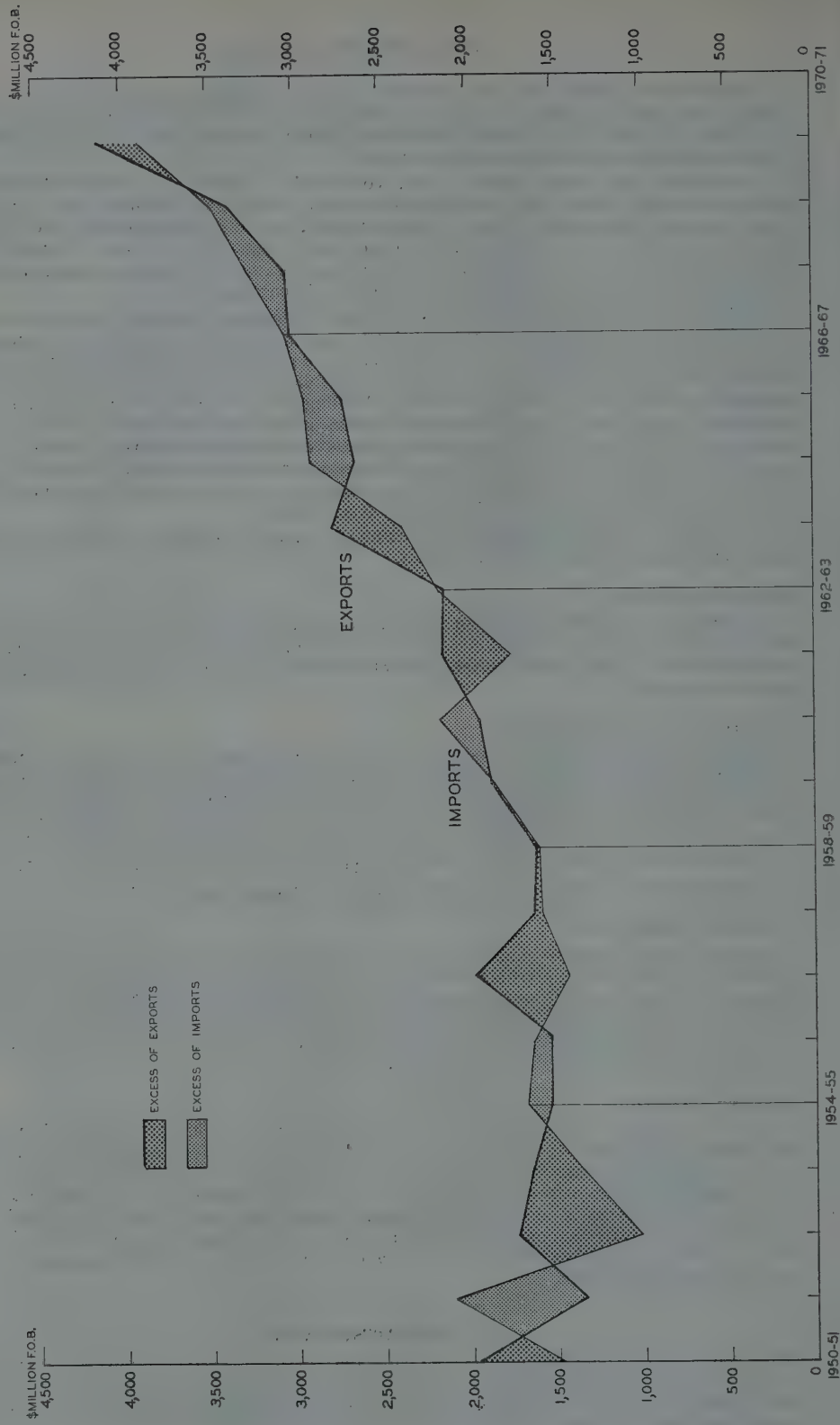


PLATE 26



OVERSEAS TRADE: AUSTRALIA, 1901 TO 1969-70  
(f.o.b.)

Period	Exports	Imports	Excess of exports (+) or imports (-)	Value per head of population	
				Exports	Imports
Annual average—	\$m	\$m	\$m	\$	\$
1901 to 1905 . . . . .	102	71	+ 31	26.2	18.2
1906 to 1910 . . . . .	(a)139	94	+ 45	32.6	22.0
1911 to 1915-16 . . . . .	149	133	+ 16	30.8	27.6
1916-17 to 1920-21 . . . . .	230	183	+ 47	43.8	34.8
1921-22 to 1925-26 . . . . .	269	249	+ 20	45.8	42.2
1926-27 to 1930-31 . . . . .	263	239	+ 24	41.0	37.2
1931-32 to 1935-36 . . . . .	242	148	+ 94	36.2	22.2
1936-37 to 1940-41 . . . . .	315	247	+ 68	45.4	35.6
1941-42 to 1945-46 . . . . .	328	423	- 95	44.8	58.2
1946-47 to 1950-51 . . . . .	1,143	899	+244	145.4	114.3
1951-52 to 1955-56 . . . . .	1,572	1,566	+ 6	176.4	175.6
1956-57 to 1960-61 . . . . .	1,811	1,729	+ 82	182.0	173.7
1961-62 to 1965-66 . . . . .	2,492	2,430	+ 62	224.8	218.6
Year—					
1960-61 . . . . .	1,938	2,175	-237	186.5	209.3
1961-62 . . . . .	2,155	1,769	+385	202.4	166.2
1962-63 . . . . .	2,152	2,163	- 11	198.5	199.4
1963-64 . . . . .	2,782	2,373	+410	251.6	214.5
1964-65 . . . . .	2,651	2,905	-253	235.1	257.5
1965-66 . . . . .	2,721	2,939	-218	236.6	255.6
1966-67 . . . . .	3,024	3,045	- 21	258.3	260.1
1967-68 . . . . .	3,045	3,264	-220	255.3	273.7
1968-69 . . . . .	3,374	3,469	- 94	277.2	285.0
1969-70 . . . . .	4,132	3,881	+250	332.0	312.1

(a) Prior to 1906, ships' stores were included in exports. For value of such goods loaded on overseas vessels and aircraft during each of the years 1967-68 to 1969-70, see page 309.

Plate 26 opposite shows the overseas trade to Australia from 1949-50 to 1969-70.

The following table shows particulars of merchandise and non-merchandise trade for each of the years 1965-66 to 1969-70.

MERCHANDISE AND NON-MERCHANDISE TRADE: AUSTRALIA, 1965-66 TO 1969-70  
(\$'000 f.o.b.)

EXPORTS

Year	Merchandise			Non-merchandise			Total
	Australian produce	Re-exports	Total	Australian produce	Re-exports	Total	
1965-66 . . . . .	2,578,184	55,348	2,633,532	59,913	27,508	87,421	2,720,953
1966-67 . . . . .	2,872,396	62,176	2,934,572	63,827	25,498	89,325	3,023,897
1967-68 . . . . .	2,861,812	73,388	2,935,200	73,344	36,132	109,476	3,044,675
1968-69 . . . . .	3,156,231	84,054	3,240,283	88,848	45,131	133,980	3,374,263
1969-70 . . . . .	3,863,038	131,090	3,994,128	97,146	40,269	137,415	4,131,543

IMPORTS

Year	Merchandise	Non-merchandise	Total
1965-66 . . . . .	2,898,280	41,212	2,939,492
1966-67 . . . . .	3,003,973	41,368	3,045,341
1967-68 . . . . .	3,215,003	49,470	3,264,473
1968-69 . . . . .	3,423,276	45,229	3,468,505
1969-70 . . . . .	3,822,623	58,604	3,881,227

# Classified summary of Australian overseas trade

The following table shows exports and imports according to divisions of the Australian Export and Import Commodity Classifications (based on the Standard International Trade Classification) during each of the years 1967-68 to 1969-70.

## EXPORTS AND IMPORTS: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1967-68 TO 1969-70 (\$'000 f.o.b.)

Division No.	Description	Exports			Imports		
		1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
00	Live animals . . . . .	5,891	5,444	7,358	2,745	2,681	4,355
01	Meat and meat preparations . . . . .	279,155	285,800	417,909	957	1,044	2,288
02	Dairy products and eggs . . . . .	92,855	79,473	102,254	3,817	4,506	5,757
03	Fish and fish preparations . . . . .	34,000	37,025	39,107	27,463	30,677	33,368
04	Cereals and cereal preparations . . . . .	419,087	351,400	431,792	3,790	6,332	4,747
05	Fruit and vegetables . . . . .	110,780	96,757	94,102	19,268	21,311	23,855
06	Sugar, preparations, honey . . . . .	104,972	129,753	121,848	2,495	2,606	3,004
07	Coffee, tea, cocoa, and spices . . . . .	2,915	2,867	4,240	46,334	49,288	51,396
08	Feeding stuff for animals . . . . .	6,383	8,314	12,406	8,176	6,502	6,882
09	Miscellaneous food preparations . . . . .	2,949	3,420	3,500	2,051	2,853	4,199
11	Beverages . . . . .	7,535	7,363	7,623	13,457	15,464	16,469
12	Tobacco and tobacco manufactures . . . . .	2,623	2,374	2,982	22,460	28,362	31,975
21	Hides, skins and fur skins, undressed . . . . .	64,159	77,342	89,922	2,426	2,822	1,664
22	Oil seeds, oil nuts and oil kernels . . . . .	837	1,663	1,094	9,495	7,356	9,897
23	Crude rubber (including synthetic and reclaimed) . . . . .	465	768	806	24,482	27,837	30,111
24	Wood, timber and cork . . . . .	3,753	3,609	4,397	41,506	47,585	53,077
25	Pulp and waste paper . . . . .	227	370	411	25,145	26,410	36,550
26	Textile fibres and their waste . . . . .	718,516	800,420	768,802	31,812	33,101	33,815
27	Crude fertilisers and minerals (see also Divisions 32 and 33) . . . . .	3,640	5,361	9,524	71,008	66,054	60,989
28	Metalliferous ores and metal scrap . . . . .	242,574	340,372	506,567	5,956	5,109	7,877
29	Crude animal and vegetable materials, n.e.s. . . . .	11,442	10,659	14,636	11,999	12,146	13,265
32	Coal, coke, and briquettes . . . . .	88,594	119,142	172,414	356	581	804
33	Petroleum and petroleum products . . . . .	33,224	26,426	27,722	240,600	251,185	254,390
34	Petroleum gases and other gaseous hydrocarbons . . . . .	106	112	193	45	31	45
41	Animal oils and fats . . . . .	10,794	12,118	24,836	1,158	777	893
42	Fixed vegetable oils and fats . . . . .	197	97	100	10,833	10,523	12,532
43	Animal and vegetable oils, fats and waxes, processed . . . . .	827	738	913	1,713	2,161	2,174
51	Chemical elements and compounds . . . . .	57,711	84,763	94,155	100,195	108,508	117,454
52	Mineral tar and crude chemicals from coal, petroleum and natural gas . . . . .	397	270	256	2,349	1,786	2,162
53	Dyeing, tanning and colouring materials . . . . .	5,280	8,410	8,472	17,934	19,046	22,364
54	Medicinal and pharmaceutical . . . . .	13,294	15,864	18,383	38,011	39,803	51,220
55	Essential oils and perfume materials; toilet and cleansing preparations . . . . .	4,345	4,580	6,104	12,804	14,289	16,505
56	Fertilisers, manufactured . . . . .	161	177	844	12,092	11,589	7,209
57	Explosives and pyrotechnic products . . . . .	2,348	2,267	2,436	7,027	4,586	4,922
58	Plastic materials, regenerated cellulose and artificial resins . . . . .	5,379	6,201	6,802	76,096	80,342	91,161
59	Chemical materials, n.e.s. . . . .	15,399	19,346	23,537	42,496	48,252	49,726
61	Leather, leather manufactures, n.e.s. and dressed fur skins . . . . .	5,512	6,500	5,652	6,056	6,145	7,332
62	Rubber manufactures, n.e.s. . . . .	5,055	7,606	12,127	39,587	37,040	41,995
63	Wood and cork manufactures (excluding furniture) . . . . .	1,959	2,817	2,559	12,931	14,373	15,391
64	Paper, paperboard and manufactures . . . . .	9,235	10,534	12,080	93,354	99,689	107,799
65	Textile yarn, fabrics, made-up articles . . . . .	12,146	15,882	18,909	248,069	263,400	287,324
66	Non-metallic mineral manufactures, n.e.s. . . . .	18,002	25,124	27,042	57,691	65,772	78,267
67	Iron and steel . . . . .	91,835	110,402	135,707	86,921	95,848	95,286
68	Non-ferrous metals . . . . .	149,898	181,069	284,112	24,246	26,088	24,515
69	Manufactures of metal, n.e.s. . . . .	29,524	31,380	42,466	75,416	79,286	94,650
71	Machinery, other than electric . . . . .	57,960	65,895	89,804	586,474	603,839	708,828
72	Electrical machinery and apparatus . . . . .	25,564	26,940	36,927	207,781	215,262	251,367
73	Transport equipment . . . . .	73,665	89,214	153,071	455,870	508,729	567,496
81	Sanitary, plumbing, heating and lighting fixtures and fittings . . . . .	1,423	1,431	1,769	4,048	4,648	5,664
82	Furniture . . . . .	1,275	1,297	1,355	3,614	4,911	5,463
83	Travel goods, handbags, etc. . . . .	167	166	293	4,748	5,052	5,740
84	Clothing and accessories; articles of knitted or crocheted fabric . . . . .	5,537	7,488	9,030	25,657	29,813	34,385
85	Footwear, gaiters and similar articles . . . . .	512	484	761	8,775	10,660	15,481
86	Professional, scientific and controlling instruments; photographic and optical goods, watches and clocks . . . . .	13,922	17,382	20,106	92,173	100,950	120,711
89	Manufactured articles, n.e.s. . . . .	20,246	20,661	23,765	130,498	142,100	162,218
9(A)	Commodities and transactions not classified according to kind . . . . .	58,949	66,943	88,143	110,542	116,165	123,611
	Total merchandise . . . . .	2,935,200	3,240,283	3,994,128	3,215,003	3,423,276	3,822,623
9(B)	Non-merchandise . . . . .	109,476	133,980	137,415	49,470	45,229	58,604
	Total . . . . .	3,044,675	3,374,263	4,131,543	3,264,473	3,468,505	3,881,227

## Exports of principal articles of Australian produce

## EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE, 1967-68 TO 1969-70

Article		Quantity			Value (\$'000 f.o.b.)		
		1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Meat, fresh, chilled or frozen—							
Of bovine animals . . . . .	'000 lb	564,250	564,547	722,901	198,630	211,012	292,128
Of sheep, lambs and goats . . . . .	"	254,477	234,349	394,159	49,984	45,711	81,747
Meat, canned or bottled . . . . .	"	45,647	36,628	37,715	12,676	10,062	10,319
Sausage casings (natural) . . . . .	"	..	..	..	5,494	5,350	8,211
Other meat (incl. poultry, game, rabbits)	"	..	..	..	17,843	19,006	33,695
Milk and cream . . . . .	'000 lb	149,863	153,987	199,754	21,961	18,974	22,511
Butter . . . . .	"	172,453	165,501	218,164	46,976	40,523	52,459
Cheese . . . . .	"	76,036	56,096	90,037	17,933	13,872	19,570
Fish (incl. shell fish) fresh or preserved by cold process . . . . .	"	21,386	20,725	25,004	30,983	34,301	36,502
Wheat . . . . .	tons	6,395,852	4,813,574	6,777,309	342,767	258,334	337,570
Barley, unprepared . . . . .	"	127,246	443,551	621,348	6,569	18,246	22,718
Oats . . . . .	"	179,152	328,096	215,820	8,407	13,042	7,559
Flour (wheaten), plain white . . . . .	'000 lb	760,454	699,175	657,666	23,534	21,807	21,185
Fruit, dried—							
Grapes . . . . .	"	151,131	137,776	97,268	20,775	19,513	14,361
All other . . . . .	"	8,028	5,401	4,828	2,015	2,087	1,717
Fruit, canned or bottled . . . . .	"	425,328	311,061	293,417	50,661	37,842	37,230
Sugar, the produce of cane . . . . .	tons	1,597,235	2,029,177	1,364,307	97,582	122,214	116,120
Wine . . . . .	gallons	1,844,623	1,803,786	1,294,786	3,165	3,399	2,913
Hides and skins—							
Calf, cattle and horse . . . . .	'000 lb	112,067	119,866	143,079	14,685	17,592	21,917
Sheep and lamb (excl. pieces) . . . . .	'000	30,989	30,565	35,555	46,127	55,853	64,091
Timber, wood in the rough, shaped or simply worked . . . . .	super ft	18,278	17,622	24,834	3,069	3,026	4,121
Wool—							
Greasy . . . . .	'000 lb	1,390,319	1,467,938	1,569,546	643,275	717,014	683,545
Scoured or washed, carbonised, tops, noils and waste . . . . .	"	123,587	118,228	118,931	72,456	78,493	77,498
Iron ore concentrates (except roasted iron pyrites) . . . . .	tons	12,325,812	20,071,987	33,244,279	103,070	179,515	277,810
Copper ores and concentrates . . . . .	"	47,256	41,073	64,082	10,098	9,769	14,620
Lead ores and concentrates . . . . .	"	113,498	111,145	119,468	22,047	21,605	23,320
Zinc ores and concentrates . . . . .	"	311,437	334,817	430,216	21,305	22,235	30,503
Titanium and zirconium concentrates . . . . .	"	920,767	1,077,300	1,276,133	35,316	40,025	49,629
Coal . . . . .	"	10,206,765	13,814,749	17,344,788	85,150	117,103	164,330
Petroleum and petroleum products . . . . .	"	..	..	..	32,976	26,240	27,427
Tallow, inedible . . . . .	cwt	1,654,071	2,035,529	3,019,497	8,644	9,482	20,455
Leather (excl. leather manufactures) . . . . .	"	..	..	..	5,027	5,791	4,520
Lead and lead alloys, unworked . . . . .	cwt	5,224,428	4,919,311	6,670,659	62,895	65,523	105,956
Copper and copper alloys . . . . .	"	578,925	969,743	1,243,193	33,104	53,420	91,030
Zinc and zinc alloys . . . . .	"	1,782,718	2,311,239	3,045,450	20,877	27,291	38,736
Machinery and transport equipment . . . . .	"	..	..	..	104,673	125,126	207,235
Drugs and chemicals . . . . .	"	..	..	..	83,872	117,839	132,946
Paper, pulp and stationery . . . . .	"	..	..	..	13,786	15,310	17,743
Motor vehicles (new, assembled) . . . . .	No	7,549	7,202	13,255	12,015	11,828	21,374
All other articles . . . . .	"	..	..	..	542,734	629,704	762,863
<b>Total, Australian produce . . . . .</b>					<b>2,935,156</b>	<b>3,245,079</b>	<b>3,960,184</b>



## Exports, by industrial group

The following table provides an analysis of Australian exports for the years 1967-68 to 1969-70. This analysis is designed to show fluctuations in exports of Australian produce dissected according to the main industry of their origin, although any such classification is necessarily somewhat conventional.

**EXPORTS OF AUSTRALIAN PRODUCE, BY INDUSTRIAL GROUP**  
1967-68 TO 1969-70

<i>Industrial group</i>	<i>Value (\$'000 f.o.b.)</i>			<i>Proportion of value of exports of Australian produce (excluding gold) (per cent)</i>		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Agriculture, horticulture and viticulture—						
Unprocessed . . . . .	411,004	350,384	435,837	14.1	10.8	11.1
Processed . . . . .	225,144	232,822	222,116	7.7	7.3	5.7
Total, agriculture, etc. . . . .	636,148	583,206	657,953	21.8	18.1	16.8
Pastoral—						
Unprocessed . . . . .	975,344	1,069,544	1,175,913	33.4	33.2	29.9
Processed . . . . .	110,184	118,030	137,083	3.8	3.6	3.5
Total, pastoral . . . . .	1,085,528	1,187,574	1,312,996	37.2	36.8	33.4
Dairy and farmyard—						
Unprocessed . . . . .	4,492	5,196	8,779	0.1	0.2	0.2
Processed . . . . .	92,598	77,681	100,985	3.2	2.4	2.6
Total, dairy, etc. . . . .	97,090	82,877	109,764	3.3	2.6	2.8
Mines and quarries (other than gold)—						
Unprocessed . . . . .	317,409	440,513	647,551	10.9	13.7	16.5
Processed . . . . .	161,977	193,187	304,715	5.5	6.0	7.7
Total, mines, etc. . . . .	479,386	633,700	952,266	16.4	19.7	24.2
Fisheries—						
Unprocessed . . . . .	32,923	38,066	39,707	1.1	1.2	1.0
Processed . . . . .	3,402	3,088	2,960	0.1	0.1	0.1
Total, fisheries . . . . .	36,325	41,154	42,667	1.2	1.3	1.1
Forestry—						
Unprocessed . . . . .	521	315	507	0.0	0.0	0.0
Processed . . . . .	4,264	4,425	5,304	0.2	0.1	0.1
Total, forestry . . . . .	4,785	4,740	5,811	0.2	0.1	0.1
Total, primary produce—						
Unprocessed . . . . .	1,741,693	1,904,018	2,308,294	59.6	59.1	58.7
Processed . . . . .	597,569	629,233	773,163	20.5	19.5	19.7
Total, primary produce . . . . .	2,339,262	2,533,251	3,081,457	80.1	78.6	78.4
Manufactures . . . . .	467,891	565,969	715,266	16.0	17.6	18.2
Refined petroleum oils . . . . .	32,208	25,560	26,731	1.1	0.8	0.7
Unclassified . . . . .	80,422	97,592	107,345	2.8	3.0	2.7
Total Australian produce (excluding gold) . . . . .	2,919,783	3,222,373	3,930,798	100.0	100.0	100.0
Re-exports (excluding gold) . . . . .	109,519	129,185	171,359	..	..	..
Gold exports . . . . .	15,373	22,706	29,385	..	..	..
Total value of recorded exports . . . . .	3,044,675	3,374,263	4,131,543	..	..	..

The items enumerated indicate how arbitrary is the line necessarily drawn between primary produce and manufactures in any classification of this kind. The value of processed primary products exported includes some element of value added by the simpler processes of manufacture, while the value shown for manufactures exported necessarily includes the value of raw materials (primary produce) used in those manufactures.

## Imports of merchandise, by economic class

The following table shows imports of merchandise into Australia during the years 1967-68 to 1969-70 classified according to economic classes of (i) purpose and (ii) degree of manufacture.

IMPORTS OF MERCHANDISE, BY ECONOMIC CLASS: AUSTRALIA  
1967-68 TO 1969-70

	Value (\$'000 f.o.b.)			Proportion of value of imports of merchandise (per cent)		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
PURPOSE						
Producers' materials for use in—						
Building and construction . . . . .	99,887	131,369	132,651	3.1	3.9	3.5
Rural industries . . . . .	59,132	55,631	51,124	1.8	1.6	1.3
Manufacturing—						
Motor vehicle assembly(a) . . . . .	220,842	235,990	288,070	6.9	6.9	7.5
Other(b) . . . . .	1,132,178	1,175,519	1,257,031	35.2	34.4	32.9
Total, producers' materials(b) . . . . .	1,512,040	1,598,509	1,728,876	47.0	46.8	45.2
Capital equipment(c)—						
Producers' equipment . . . . .	699,475	723,851	858,196	21.8	21.1	22.4
Transport equipment—						
Complete road vehicles and assembled chassis . . . . .	89,021	108,779	121,324	2.8	3.2	3.2
Railway equipment, vessels and civil aircraft . . . . .	101,469	73,262	108,499	3.1	2.0	2.8
Total, capital equipment . . . . .	889,965	905,892	1,088,019	27.7	26.3	28.4
Finished consumer goods—						
Food, beverages and tobacco . . . . .	113,600	126,777	142,879	3.5	3.7	3.8
Clothing and accessories . . . . .	30,967	35,468	45,382	1.0	1.1	1.2
All other(d) . . . . .	433,071	463,303	578,359	13.5	13.5	15.1
Total, finished consumer goods(d) . . . . .	577,638	625,548	766,620	18.0	18.3	20.1
Fuels and lubricants(e) . . . . .	27,030	33,388	47,905	0.8	1.0	1.3
Auxiliary aids to production(f) . . . . .	83,098	85,800	95,875	2.6	2.5	2.5
Munitions and war stores . . . . .	125,232	174,139	95,328	3.9	5.1	2.5
Grand total . . . . .	3,215,003	3,423,276	3,822,623	100.0	100.0	100.0
DEGREE OF MANUFACTURE(g)						
Producers' materials—						
Crude . . . . .	419,516	423,590	415,145	13.0	12.4	10.9
Simply transformed . . . . .	220,866	231,376	272,213	6.9	6.8	7.2
Elaborately transformed . . . . .	871,658	943,543	1,041,518	27.1	27.6	27.2
Finished consumer goods—						
Crude . . . . .	26,562	32,912	34,106	0.8	1.0	0.9
Simply transformed . . . . .	44,367	48,046	47,784	1.4	1.4	1.2
Elaborately transformed . . . . .	506,709	544,590	684,730	15.8	15.9	17.9
Total imports—						
Crude . . . . .	446,078	456,502	449,251	13.9	13.4	11.8
Simply transformed . . . . .	343,949	368,043	429,473	10.7	10.8	11.2
Elaborately transformed . . . . .	2,424,976	2,598,731	2,943,899	75.4	75.8	77.0
Grand total . . . . .	3,215,003	3,423,276	3,822,623	100.0	100.0	100.0

(a) Owing to insufficient information, it is not possible to treat unassembled tractors and other machinery in a similar manner to motor vehicles, and all such machinery and replacement parts therefor are treated as capital equipment whether imported in an assembled or unassembled condition. (b) Excludes a percentage for piece goods to be sold at retail, and paper to be used solely for wrapping, which are recorded in Finished consumer goods, All other, and Auxiliary aids to production, respectively. (c) See footnote (a). (d) Includes a percentage for piece goods to be sold at retail; see footnote (b). (e) Excludes crude petroleum, which is included in Producers' materials, Manufacturing—Other. (f) Includes a percentage for paper to be used solely for wrapping; see footnote (b). (g) The class Fuels and lubricants consists of goods 'simply transformed', and the classes Capital equipment and Munitions and war stores entirely of goods 'more elaborately transformed'. The class Auxiliary aids to production is about equally divided between goods 'simply transformed' and 'elaborately transformed'.

## Direction of Overseas Trade

## Exports and imports, by country of consignment or of origin

The following two tables show the value and percentage of Australian exports and imports during each of the years 1949-50, 1959-60 and 1969-70 according to principal country of consignment or origin. The proportions of Australian exports and imports by country of origin or consignment are shown graphically on plate 27 on page 306.

**AUSTRALIAN EXPORTS AND IMPORTS, VALUE BY COUNTRY OF CONSIGNMENT  
OR ORIGIN, 1949-50, 1959-60, 1969-70**  
(£'000 f.o.b.)

Country	Exports			Imports		
	1949-50	1959-60	1969-70	1949-50	1959-60	1969-70
Austria . . . . .	1,678	3,822	1,736	1,005	6,216	9,256
Belgium-Luxembourg . . . . .	54,983	48,592	42,863	7,178	16,940	29,120
Brunei . . . . .	(a)	(a)	8,700	(a)	(a)	14,452
Canada . . . . .	18,095	27,810	112,773	26,551	59,306	151,031
Ceylon . . . . .	12,141	15,422	14,718	17,873	22,476	11,321
China (mainland) . . . . .	1,005	32,264	125,815	2,903	8,838	32,082
China, Republic of (Taiwan) . . . . .	..	2,706	29,912	..	216	15,869
Czechoslovakia . . . . .	6,170	16,776	8,745	8,742	5,148	7,610
Denmark . . . . .	5,230	2,254	4,060	670	3,880	10,976
Fiji . . . . .	4,837	10,228	19,894	138	2,778	5,010
Finland . . . . .	2,946	576	4,296	2,716	7,844	17,724
France . . . . .	81,322	120,650	114,640	21,289	27,486	70,059
Germany, Federal Republic of . . . . .	(a)	76,666	115,557	(a)	107,738	258,275
Hong Kong . . . . .	13,697	18,548	84,718	1,399	10,322	54,022
India . . . . .	74,068	32,808	40,237	55,328	36,360	31,839
Indonesia . . . . .	1,013	6,442	35,266	29,499	58,876	48,882
Iran . . . . .	3,547	7,240	14,794	22,337	25,332	12,770
Iraq . . . . .	354	13,620	3,947	404	572	10,898
Italy . . . . .	38,811	93,148	105,961	18,116	26,022	77,378
Japan . . . . .	47,949	269,348	1,021,446	13,998	83,066	481,203
Korea, Republic of . . . . .	(a)	7,984	12,371	(a)	2	2,183
Kuwait . . . . .	(a)	1,402	9,084	(a)	14,236	45,661
Malaysia . . . . .	(a)	(a)	68,525	(a)	(a)	34,922
Mexico . . . . .	3,608	6,418	12,975	13	4,146	5,928
Nauru . . . . .	724	2,008	4,035	2,527	3,992	15,466
Netherlands . . . . .	17,757	11,712	71,542	6,406	37,364	59,981
New Zealand . . . . .	42,570	108,686	198,872	9,913	31,744	86,435
Norway . . . . .	2,749	1,116	6,201	6,200	7,932	10,226
Pakistan . . . . .	724	10,054	16,394	2,456	6,760	18,953
Papua and New Guinea . . . . .	11,341	32,602	147,298	5,266	17,280	21,631
Philippines . . . . .	1,308	9,836	55,890	137	538	4,294
Poland . . . . .	26,338	21,716	20,108	342	506	2,981
Saudi Arabia . . . . .	(a)	1,736	10,385	(a)	12,486	42,099
Singapore . . . . .	16,143	21,896	98,469	14,616	3,120	14,031
South Africa . . . . .	5,664	16,262	64,860	7,279	14,572	21,631
Spain . . . . .	4,095	256	18,136	791	4,290	13,112
Sweden . . . . .	10,087	4,292	9,635	15,510	28,572	59,136
Switzerland . . . . .	3,133	3,894	3,456	5,516	23,908	59,004
Thailand . . . . .	1,459	4,756	29,117	166	842	2,687
United Kingdom . . . . .	475,052	494,642	488,230	557,496	660,604	845,344
United States of America . . . . .	99,288	151,858	556,431	84,497	300,062	965,245
U.S.S.R. . . . .	22,375	25,160	51,438	1,411	1,050	3,475
Yugoslavia . . . . .	4,080	7,936	17,062	29	102	880
Other countries . . . . .	111,052	118,598	243,920	103,228	169,060	179,568
'For Orders' and Country of origin or destination unknown . . . . .	..	11,624	7,031	(b)22,193	1,598	16,577
<b>Total . . . . .</b>	<b>1,227,393</b>	<b>1,875,364</b>	<b>4,131,543</b>	<b>1,076,138</b>	<b>1,854,182</b>	<b>3,881,227</b>

(a) Comparable figures not available.

(b) Includes 'Outside packages' valued at \$21,741,000.



## AUSTRALIAN EXPORTS AND IMPORTS, PROPORTIONS, BY COUNTRY OF CONSIGNMENT OR ORIGIN, 1949-50, 1959-60, 1969-70

(Per cent)

Country	Exports			Imports		
	1949-50	1959-60	1969-70	1949-50	1959-60	1969-70
Austria . . . . .	0.14	0.20	0.04	0.09	0.34	0.24
Belgium-Luxembourg . . . . .	4.48	2.59	1.04	0.67	0.91	0.75
Brunei . . . . .	(a)	(a)	0.21	(a)	(a)	0.37
Canada . . . . .	1.47	1.48	2.73	2.47	3.20	3.89
Ceylon . . . . .	0.99	0.82	0.36	1.66	1.21	0.29
China (mainland) . . . . .	0.08	1.72	3.05	0.27	0.48	0.84
China, Republic of (Taiwan) . . . . .	..	0.14	0.72	..	0.01	0.41
Czechoslovakia . . . . .	0.50	0.89	0.21	0.81	0.28	0.20
Denmark . . . . .	0.43	0.12	0.10	0.06	0.21	0.28
Fiji . . . . .	0.39	0.55	0.48	0.01	0.15	0.13
Finland . . . . .	0.24	0.03	0.10	0.25	0.42	0.46
France . . . . .	6.63	6.43	2.77	1.98	1.48	1.80
Germany, Federal Republic of . . . . .	(a)	4.09	2.80	(a)	5.81	6.65
Hong Kong . . . . .	1.12	0.99	2.05	0.13	0.56	1.39
India . . . . .	6.03	1.75	0.97	5.14	1.96	0.82
Indonesia . . . . .	0.08	0.34	0.85	2.74	3.18	1.26
Iran . . . . .	0.29	0.39	0.36	2.08	1.37	0.33
Iraq . . . . .	0.03	0.73	0.10	0.04	0.03	0.28
Italy . . . . .	3.16	4.97	2.56	1.68	1.40	2.00
Japan . . . . .	3.91	14.36	24.72	1.30	4.48	12.40
Korea, Republic of . . . . .	(a)	0.43	0.30	(a)	0.00	0.06
Kuwait . . . . .	(a)	0.07	0.22	(a)	0.77	1.18
Malaysia . . . . .	(a)	(a)	1.66	(a)	(a)	0.90
Mexico . . . . .	0.29	0.34	0.32	0.00	0.22	0.15
Nauru . . . . .	0.06	0.11	0.10	0.23	0.22	0.40
Netherlands . . . . .	1.45	0.62	1.73	0.60	2.02	1.54
New Zealand . . . . .	3.47	5.80	4.81	0.92	1.71	2.23
Norway . . . . .	0.22	0.06	0.15	0.58	0.43	0.26
Pakistan . . . . .	0.06	0.54	0.40	0.23	0.36	0.49
Papua and New Guinea . . . . .	0.92	1.74	3.57	0.49	0.93	0.55
Philippines . . . . .	0.11	0.52	1.35	0.01	0.03	0.11
Poland . . . . .	2.15	1.16	0.49	0.03	0.03	0.08
Saudi Arabia . . . . .	(a)	0.09	0.25	(a)	0.67	1.08
Singapore . . . . .	1.32	1.17	2.38	1.36	0.17	0.36
South Africa . . . . .	0.46	0.87	1.57	0.68	0.79	0.56
Spain . . . . .	0.33	0.01	0.44	0.07	0.23	0.34
Sweden . . . . .	0.82	0.23	0.23	1.44	1.54	1.52
Switzerland . . . . .	0.26	0.21	0.08	0.51	1.29	1.52
Thailand . . . . .	0.12	0.25	0.71	0.02	0.05	0.07
United Kingdom . . . . .	38.70	26.38	11.82	51.81	35.63	21.78
United States of America . . . . .	8.09	8.10	13.47	7.85	16.18	24.87
U.S.S.R. . . . .	1.82	1.34	1.25	0.13	0.06	0.09
Yugoslavia . . . . .	0.33	0.42	0.41	0.00	0.01	0.02
Other Countries . . . . .	9.05	6.33	5.90	9.60	9.09	4.62
'For Orders' and Country of origin or destination unknown . . . . .	..	0.62	0.17	(b)2.06	0.09	0.43
<b>Total . . . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

(a) Comparable figures not available. (b) Includes 'Outside packages'.

## Exports and Imports, by country of consignment and origin, and by description

The following table shows details of exports to and imports from principal countries, classified according to divisions of the Australian Export and Import Commodity Classifications, for the year 1969-70.

## EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1969-70

(\$'000 f.o.b.)

Division No.	Description	Belgium-Luxembourg		Canada		Ceylon	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals . . . . .	..	..	..	..	6	..
01	Meat and meat preparations . . . . .	152	..	41,948	320	6	..
02	Dairy products and eggs . . . . .	2	8	345	..	1,800	..
03	Fish and fish preparations . . . . .	58	4	114	1,413	..	3
04	Cereal grains and cereal preparations . . . . .	60	17	4	303	10,271	..
05	Fruit and vegetables . . . . .	323	196	7,480	674	264	59
06	Sugar and sugar preparations and honey . . . . .	4	3	10,186	10	3	..
07	Coffee, tea, cocoa, spices and manufactures thereof . . . . .	..	5	27	4	..	10,172
08	Feeding-stuff for animals (except unmilled cereals) . . . . .	..	..	23	..	92	..
09	Miscellaneous preparations chiefly for food . . . . .	2	5	2	79	3	49
11	Beverages . . . . .	..	..	1,525	118	1	1
12	Tobacco and tobacco manufactures . . . . .	..	11	..	112	..	..
21	Hides, skins and fur skins, undressed . . . . .	144	..	14	67	..	..
22	Oil-seeds, oil nuts and oil kernels . . . . .	..	..	..	850	..	..
23	Crude rubber (including synthetic and reclaimed) . . . . .	..	872	2	676	..	62
24	Wood, timber and cork . . . . .	61	22	3	17,156	..	1
25	Pulp and waste paper . . . . .	..	..	..	10,522	..	..
26	Textile fibres and their waste . . . . .	28,062	579	4,988	1,634	6	375
27	Crude fertilisers and crude minerals (except coal, petroleum and precious stones) . . . . .	4	85	4	13,963	3	59
28	Metalliferous ores and metal scrap . . . . .	9,449	..	27,818	1,942	9	..
29	Crude animal and vegetable materials, n.e.s. . . . .	58	53	463	180	43	72
32	Coal, coke and briquettes . . . . .	..	..	..	20	203	..
33	Petroleum and petroleum products . . . . .	..	59	1	75	..	170
34	Petroleum gases and other gaseous hydrocarbons . . . . .	..	..	..	..	..	..
41	Animal oils and fats . . . . .	82	..	45	1	308	..
42	Fixed vegetable oils and fats . . . . .	..	1	..	676	..	..
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin . . . . .	..	5	45	73	8	..
51	Chemical elements and compounds . . . . .	428	1,157	7,515	2,991	25	..
52	Mineral tar and crude chemicals from coal, petroleum and natural gas . . . . .	..	..	..	..	..	..
53	Dyeing, tanning and colouring materials . . . . .	4	28	13	329	71	..
54	Medicinal and pharmaceutical products . . . . .	1	422	13	354	64	..
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations . . . . .	10	37	4	154	19	12
56	Fertilisers, manufactured . . . . .	..	23	3	1,802	..	..
57	Explosives and pyrotechnic products . . . . .	..	50	1	107	..	..
58	Plastic materials, regenerated cellulose and artificial resins . . . . .	..	296	23	4,636	5	..
59	Chemical materials and products, n.e.s. . . . .	35	255	283	436	33	..
61	Leather, leather manufactures, n.e.s., and dressed fur skins . . . . .	43	51	289	29	42	..
62	Rubber manufactures, n.e.s. . . . .	3	84	19	482	4	..
63	Wood and cork manufactures (except furniture) . . . . .	9	86	6	252	11	2
64	Paper, paperboard and manufactures thereof . . . . .	..	892	27	23,130	124	..
65	Textile yarn, fabrics, made-up articles and related products . . . . .	1	3,477	581	4,188	1	13
66	Non-metallic mineral manufactures, n.e.s. . . . .	210	5,089	233	721	4	40
67	Iron and steel . . . . .	697	365	2,060	4,392	153	..
68	Non-ferrous metals . . . . .	2,096	222	22	3,892	325	..
69	Manufactures of metal, n.e.s. . . . .	105	1,154	1,250	5,611	140	1
71	Machinery (except electric) . . . . .	352	4,387	946	23,981	252	2
72	Electric machinery, apparatus and appliances . . . . .	61	1,941	541	4,579	89	..
73	Transport equipment . . . . .	23	4,956	524	9,221	91	..
81	Sanitary, plumbing, heating and lighting fixtures and fittings . . . . .	..	9	1	166	4	..
82	Furniture . . . . .	..	1	1	51	3	..
83	Travel goods, handbags and similar articles . . . . .	..	3	6	65	..	..
84	Clothing and clothing accessories; articles of knitted or crocheted fabric . . . . .	123	25	417	295	9	..
85	Footwear, gaiters, and similar articles and parts therefor . . . . .	..	2	15	38	..	..
86	Professional, scientific and controlling instruments; photographic and optical goods, watches and clocks . . . . .	30	973	861	1,628	4	1
89	Miscellaneous manufactured articles, n.e.s. . . . .	66	388	703	1,882	33	6
9A	Commodities and transactions of merchandise trade, not elsewhere classified . . . . .	13	542	202	4,120	25	219
	Total merchandise . . . . .	42,772	28,841	111,597	150,402	14,559	11,318
9B	Commodities and transactions not included in merchandise trade . . . . .	91	279	1,176	629	159	3
	Grand total . . . . .	42,863	29,120	112,773	151,031	14,718	11,321

## EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1969-70—continued

(\$'000 f.o.b.)

Div No.	China (mainland)		France		Germany, Federal Republic of		Hong Kong		India	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00	..	..	..	26	..	..	13	..	63	..
01	..	12	2,149	15	379	3	706	..	27	9
02	..	..	..	129	227	270	3,657	..	1,169	..
03	..	519	1,200	28	65	721	1,631	260	1	1,493
04	118,297	32	122	8	3,416	93	4,670	57	5,803	10
05	2	858	980	134	6,106	262	1,512	168	31	1,913
06	..	6	6	11	66	15	41	42	9	..
07	..	129	..	22	..	147	275	26	1	3,287
08	..	..	..	38	75	75	201	..	2	..
09	..	57	1	24	..	107	84	132	1	2
11	..	1	..	1,949	3	355	153	8	20	..
12	..	..	..	91	..	22	110	..	..	61
21	152	100	36,064	86	6,369	2	1,187	..	193	57
22	..	204	..	..	82	..	..	52	..	665
23	..	..	..	421	..	216	32	..	..	..
24	..	..	..	10	80	31	31	170	..	9
25	..	..	..	4	..	1	..	2	..	..
26	2,674	745	53,643	67	48,347	1,988	9,563	199	19,086	616
27	..	190	4	180	3	101	7	..	..	471
28	454	107	7,924	..	18,687	13	445	128	1,493	..
29	4	1,437	205	163	2,642	165	172	281	2	404
32	..	..	..	..	5,042	112	73	..	..	..
33	1	155	..	136	..	197	3	..	1	265
34	..	..	..	13	..	..	..	..	..	..
41	..	..	690	3	464	..	39	..	28	..
42	..	303	..	3	..	786	..	25	..	7
43	..	..	..	7	..	49	75	..	1	6
51	114	433	26	3,293	128	13,145	174	41	101	688
52	..	..	..	..	..	16	..	..	..	..
53	..	26	19	257	219	4,943	506	2	220	18
54	..	64	148	410	185	7,145	1,005	11	10	156
55	..	..	..	..	..	..	..	..	..	..
56	..	220	83	1,350	23	1,475	802	118	58	103
57	..	..	..	78	..	773	..	..	..	..
58	..	193	..	46	114	85	92	16	..	..
59	1	505	90	2,559	74	8,549	271	42	27	..
61	..	19	47	777	637	3,517	66	100	73	16
62	..	3	23	1,120	150	462	690	66	10	385
63	..	163	2	1,752	19	1,975	22	6	2	5
64	..	141	1	107	44	689	3	97	..	59
65	..	16,459	18	396	19	2,274	986	185	50	2
66	..	1,308	353	4,399	28	10,361	1,537	17,973	4	16,187
67	172	60	55	2,425	1,054	5,419	5,173	429	28	424
68	3,919	136	7,562	1,025	1,695	2,628	5,642	12	1,005	1,440
69	7	405	295	348	12,378	1,689	5,929	4	8,041	..
71	11	93	363	1,483	316	8,453	826	1,068	19	218
72	..	90	125	11,872	684	72,033	1,626	420	437	1,175
73	..	12	579	6,606	876	25,940	2,030	1,020	239	271
81	..	25	..	15,830	130	48,173	2,466	147	865	16
82	..	48	3	56	9	506	113	477	..	24
83	..	170	..	37	..	182	38	503	..	106
84	..	..	..	33	..	192	19	1,836	..	15
85	..	2,351	68	827	139	838	1,343	10,382	..	133
86	..	1,073	..	425	..	629	21	2,022	11	368
89	1	662	277	1,741	286	13,704	1,439	1,317	10	36
9A	2	1,831	99	1,689	274	8,967	1,160	13,220	41	318
9B	3	730	573	4,182	3,045	6,166	500	837	273	360
	125,814	32,072	113,797	68,693	114,577	256,661	59,161	53,899	39,459	31,800
9B	1	10	843	1,366	980	1,614	25,557	123	778	39
	125,815	32,082	114,640	70,059	115,557	258,275	84,718	54,022	40,237	31,839



EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1969-70—continued

(\$'000 f.o.b.)

Division No.	Description	Indonesia		Italy		Japan	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals . . . . .	11	..	6	..	19	..
01	Meat and meat preparations . . . . .	117	..	780	144	31,599	14
02	Dairy products and eggs . . . . .	1,604	..	93	761	10,352	..
03	Fish and fish preparations . . . . .	2	1	228	42	10,113	9,166
04	Cereal grains and cereal preparations . . . . .	7,052	..	4,259	107	65,207	150
05	Fruit and vegetables . . . . .	46	1	300	1,100	1,303	256
06	Sugar and sugar preparations and honey . . . . .	4	..	1	31	36,605	112
07	Coffee, tea, cocoa, spices and manufactures thereof . . . . .	13	4,577	..	44	1,282	2,910
08	Feeding-stuff for animals (except unmilled cereals) . . . . .	29	..	..	24	3,844	43
09	Miscellaneous preparations chiefly for food . . . . .	227	1	..	96	59	121
11	Beverages . . . . .	73	..	5	749	50	18
12	Tobacco and tobacco manufactures . . . . .	11	67	..	5	15	5
21	Hides, skins and fur skins, undressed . . . . .	..	1	17,120	..	11,685	12
22	Oil-seeds, oil nuts and oil kernels . . . . .	..	..	..	..	247	1
23	Crude rubber (including synthetic and reclaimed) . . . . .	..	..	..	..	205	1,535
24	Wood, timber and cork . . . . .	17	156	19	..	224	55
25	Pulp and waste paper . . . . .	19	..	..	..	34	..
26	Textile fibres and their waste . . . . .	144	36	64,411	108	259,128	3,485
27	Crude fertilisers and crude minerals (except coal, petroleum and precious stones) . . . . .	298	..	9	334	5,964	1,228
28	Metalliferous ores and metal scrap . . . . .	13	..	7,534	..	328,242	264
29	Crude animal and vegetable materials, n.e.s. . . . .	..	61	338	280	2,641	182
32	Coal, coke and briquettes . . . . .	..	..	1,547	..	155,911	..
33	Petroleum and petroleum products . . . . .	78	43,737	2	..	74	1,158
34	Petroleum gases and other gaseous hydrocarbons . . . . .	1	..	..	..	..	..
41	Animal oils and fats . . . . .	3	..	146	1	6,329	194
42	Fixed vegetable oils and fats . . . . .	..	..	..	313	2	550
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin . . . . .	33	..	..	..	41	16
51	Chemical elements and compounds . . . . .	502	..	102	718	9,043	15,935
52	Mineral tar and crude chemicals from coal, petroleum and natural gas . . . . .	..	..	..	..	..	397
53	Dyeing, tanning and colouring materials . . . . .	251	..	73	176	339	647
54	Medicinal and pharmaceutical products . . . . .	418	4	43	223	253	349
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations . . . . .	85	25	40	295	702	198
56	Fertilisers, manufactured . . . . .	398	..	..	243	16	1,202
57	Explosives and pyrotechnic products . . . . .	5	..	47	64	30	219
58	Plastic materials, regenerated cellulose and artificial resins . . . . .	35	..	..	1,087	65	15,920
59	Chemical materials and products, n.e.s. . . . .	50	..	458	49	5,033	2,030
61	Leather, leather manufactures, n.e.s., and dressed fur skins . . . . .	14	..	44	358	156	461
62	Rubber manufactures, n.e.s. . . . .	46	..	6	782	6	7,345
63	Wood and cork manufactures (except furniture) . . . . .	47	4	2	560	158	2,014
64	Paper, paperboard and manufactures thereof . . . . .	412	..	9	1,092	165	8,487
65	Textile yarn, fabrics, made-up articles and related products . . . . .	114	12	3	6,492	975	90,094
66	Non-metallic mineral manufactures, n.e.s. . . . .	29	..	70	2,070	6,336	16,995
67	Iron and steel . . . . .	4,006	..	1,746	1,451	13,666	41,709
68	Non-ferrous metals . . . . .	539	..	3,602	59	41,935	1,529
69	Manufactures of metal, n.e.s. . . . .	677	..	234	1,494	1,505	14,472
71	Machinery (except electric) . . . . .	2,142	..	835	20,178	1,205	51,305
72	Electric machinery, apparatus and appliances . . . . .	645	1	288	4,807	765	36,645
73	Transport equipment . . . . .	9,729	2	19	14,028	1,608	91,471
81	Sanitary, plumbing, heating and lighting fixtures and fittings . . . . .	41	..	..	518	11	366
82	Furniture . . . . .	2	..	..	603	32	867
83	Travel goods, handbags and similar articles . . . . .	..	..	1	393	24	1,569
84	Clothing and clothing accessories; articles of knitted or crocheted fabric . . . . .	1	1	144	1,628	174	2,808
85	Footwear, gaiters, and similar articles and parts thereof . . . . .	1	..	1	4,465	..	1,476
86	Professional, scientific and controlling instruments; photographic and optical goods, watches and clocks . . . . .	231	4	107	2,434	597	15,925
89	Miscellaneous manufactured articles, n.e.s. . . . .	428	6	73	4,648	1,677	25,260
9A	Commodities and transactions of merchandise trade, not elsewhere classified . . . . .	1,654	178	634	1,647	845	9,413
	Total merchandise . . . . .	32,294	48,875	105,380	76,700	1,018,497	478,587
9B	Commodities and transactions not included in merchandise trade . . . . .	2,972	7	581	678	2,949	2,616
	Grand total . . . . .	35,266	48,882	105,961	77,378	1,021,446	481,203

## EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1969-70—continued

(\$'000 f.o.b.)

Div. No.	Malaysia		Netherlands		New Zealand		Pakistan		Papua and New Guinea	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00	183	..	..	..	708	3,496	39	..	225	..
01	780	..	291	5	20	267	9	..	6,052	..
02	3,948	..	..	553	40	906	212	..	1,447	..
03	223	1,147	33	602	6	2,612	1	159	374	114
04	18,028	..	10,290	263	1,331	1,738	7,098	14	8,432	..
05	1,139	81	2,039	465	4,359	4,067	3	..	1,043	1,354
06	4,826	..	..	181	4,818	918	41	..	1,471	..
07	564	1,009	1	930	171	108	..	..	470	6,783
08	933	..	4	12	83	59	5	3	609	..
09	132	5	..	352	208	61	1	..	735	..
11	150	..	1	69	357	32	7	..	1,753	..
12	51	..	..	3,633	38	28	..	..	1,782	12
21	94	17	1,419	10	285	113	..	..	3	213
22	..	..	146	40	61	86	..	..	..	3,956
23	1	15,963	..	385	285	..	3	..	2	2,841
24	..	13,043	18	1	982	5,767	81	..	98	1,354
25	255	19	..	..	..	6,423	..	..	5	..
26	27	7	18,806	1,396	2,097	4,308	2,594	2,776	53	..
27	..	..	..	..	..	..	..	..	..	..
28	100	..	507	515	1,173	84	..	1	175	1
29	268	185	14,298	9	185	2,234	6	..	2	443
32	90	141	378	280	505	1,637	1	71	170	13
33	15	..	1,730	..	..	..	233	..	2	..
34	668	193	..	123	8,562	299	1	..	1,239	16
41	..	..	..	..	34	..	..	..	79	..
42	807	..	2,951	5	7	116	2,877	..	394	..
43	..	926	..	302	49	4	..	..	43	58
51	57	..	4	901	36	40	..	..	17	..
52	1,319	86	202	2,648	5,274	1,452	76	..	322	..
53	6	..	..	3	7	1	..	..	11	..
54	415	..	103	420	2,207	87	58	..	401	..
55	682	..	378	910	9,398	858	9	5	710	..
56	381	21	10	573	891	228	..	1	977	..
57	2	..	..	26	157	104	..	..	57	..
58	4	..	6	..	1,217	6	8	..	303	..
59	207	1	17	3,586	3,751	193	3	..	674	..
61	210	7	217	853	2,788	214	13	..	581	125
62	113	..	163	4	197	377	1	352	15	..
63	56	488	16	640	427	531	2	..	1,419	..
64	9	466	13	109	567	540	..	2	256	2,314
65	1,552	..	5	1,204	1,427	17,002	57	12	1,994	..
66	263	168	26	4,234	9,927	8,938	31	13,718	644	3
67	349	1	37	969	1,284	912	14	1	2,668	199
68	1,145	..	..	88	29,771	63	1,190	..	4,961	..
69	3,382	347	11,909	379	22,298	225	210	..	477	24
71	1,009	15	273	613	6,277	1,696	90	95	6,196	4
72	5,129	1	358	6,040	12,314	4,002	328	1,059	18,124	128
73	1,507	21	1,144	8,977	8,203	4,640	98	..	5,794	19
81	8,711	2	2,667	9,412	32,191	1,236	351	..	15,828	11
82	198	..	..	102	164	255	..	2	470	..
83	44	2	1	38	23	334	..	1	643	..
84	2	2	..	5	16	356	..	3	28	..
85	171	1	108	24	332	1,205	9	25	867	..
86	..	5	..	23	58	222	..	5	398	..
89	193	4	88	1,556	4,312	258	70	121	1,273	72
9A	292	73	150	2,824	4,884	2,206	50	284	2,034	48
9B	1,177	354	150	2,500	2,615	1,268	71	227	35,280	446
	61,868	34,801	70,957	59,792	189,377	84,811	15,951	18,938	130,080	20,552
9B	6,657	121	585	189	9,495	1,624	443	15	17,218	1,079
	68,525	34,922	71,542	59,981	198,872	86,435	16,394	18,953	147,298	21,631

EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1969-70—continued  
(\$'000 f.o.b.)

Division No.	Description	Philippines		Singapore		South Africa	
		Exports	Imports	Exports	Imports	Exports	Imports
00	Live animals . . . . .	178	..	1,621	..	88	..
01	Meat and meat preparations . . . . .	990	..	3,547	4	96	..
02	Dairy products and eggs . . . . .	4,678	..	3,277	..	77	..
03	Fish and fish preparations . . . . .	..	3	430	202	849	1,777
04	Cereal grains and cereal preparations . . . . .	4,938	..	10,516	4	578	..
05	Fruit and vegetables . . . . .	157	343	5,773	7	385	219
06	Sugar and sugar preparations and honey . . . . .	..	..	2,737	..	1	4
07	Coffee, tea, cocoa, spices and manufactures thereof . . . . .	..	..	267	96	..	..
08	Feeding-stuff for animals (except unmilled cereals) . . . . .	1,118	..	1,921	..	17	1,205
09	Miscellaneous preparations chiefly for food . . . . .	22	..	214	31	64	..
11	Beverages . . . . .	4	1	222	1	8	..
12	Tobacco and tobacco manufactures . . . . .	..	38	104	1	..	2,307
21	Hides, skins and fur skins, undressed . . . . .	18	..	321	11	1,893	8
22	Oil-seeds, oil nuts and oil kernels . . . . .	..	..	1	2	4	725
23	Crude rubber (including synthetic and reclaimed) . . . . .	104	6	9	22	19	9
24	Wood, timber and cork . . . . .	..	1,605	10	71	158	3
25	Pulp and waste paper . . . . .	..	..	61	..	..	..
26	Textile fibres and their waste . . . . .	531	73	4	..	1,218	153
27	Crude fertilisers and crude minerals (except coal, petroleum and precious stones) . . . . .	135	..	72	..	2	4,800
28	Metalliferous ores and metal scrap . . . . .	39	233	119	123	735	31
29	Crude animal and vegetable materials, n.e.s. . . . .	3	52	162	87	303	142
32	Coal, coke and briquettes . . . . .	..	..	4	..	..	105
33	Petroleum and petroleum products . . . . .	102	..	9,799	10,221	1,487	34
34	Petroleum gases and other gaseous hydrocarbons . . . . .	..	..	..	..	..	..
41	Animal oils and fats . . . . .	626	..	374	..	2,931	80
42	Fixed vegetable oils and fats . . . . .	..	34	..	52	..	765
43	Animal and vegetable oils and fats, processed and waxes of animal or vegetable origin . . . . .	65	..	40	..	15	3
51	Chemical elements and compounds . . . . .	147	23	437	150	682	853
52	Mineral tar and crude chemicals from coal, petroleum and natural gas . . . . .	..	..	9	111	..	1
53	Dyeing, tanning and colouring materials . . . . .	702	..	716	1	61	465
54	Medicinal and pharmaceutical products . . . . .	296	..	501	2	253	61
55	Essential oils and perfume materials; toilet, polishing and cleansing preparations . . . . .	50	..	440	..	143	53
56	Fertilisers, manufactured . . . . .	..	330	..	..	..	..
57	Explosives and pyrotechnic products . . . . .	..	..	..	46	38	..
58	Plastic materials, regenerated cellulose and artificial resins . . . . .	198	..	300	..	275	165
59	Chemical materials and products, n.e.s. . . . .	141	34	229	2	136	19
61	Leather, leather manufactures, n.e.s., and dressed fur skins . . . . .	37	..	602	..	212	12
62	Rubber manufactures, n.e.s. . . . .	57	..	80	22	265	32
63	Wood and cork manufactures (except furniture) . . . . .	..	703	163	151	150	165
64	Paper, paperboard and manufactures thereof . . . . .	150	..	1,589	8	42	66
65	Textile yarn, fabrics, made-up articles and related products . . . . .	1,118	78	755	34	870	18
66	Non-metallic mineral manufactures, n.e.s. . . . .	318	29	534	5	111	1,348
67	Iron and steel . . . . .	21,487	..	2,790	19	1,193	2,825
68	Non-ferrous metals . . . . .	5,061	..	3,192	1	1,506	386
69	Manufactures of metal, n.e.s. . . . .	1,931	5	1,680	55	2,788	710
71	Machinery (except electric) . . . . .	3,128	5	5,523	48	7,792	795
72	Electric machinery, apparatus and appliances . . . . .	952	..	1,832	97	2,360	319
73	Transport equipment . . . . .	3,008	..	5,180	158	31,510	100
81	Sanitary, plumbing, heating and lighting fixtures and fittings . . . . .	10	1	265	..	15	12
82	Furniture . . . . .	..	152	32	11	43	3
83	Travel goods, handbags and similar articles . . . . .	..	33	14	6	10	8
84	Clothing and clothing accessories; articles of knitted or crocheted fabric . . . . .	59	91	351	121	258	4
85	Footwear, gaiters, and similar articles and parts thereof . . . . .	..	11	1	3	2	2
86	Professional, scientific and controlling instruments; photo- graphic and optical goods, watches and clocks . . . . .	909	5	1,178	46	659	79
89	Miscellaneous manufactured articles, n.e.s. . . . .	278	314	1,094	897	1,025	87
9A	Commodities and transactions of merchandise trade, not elsewhere classified . . . . .	183	82	11,762	1,030	333	519
	Total merchandise . . . . .	53,929	4,283	82,856	13,955	63,663	21,489
9B	Commodities and transactions not included in merchandise trade . . . . .	1,961	11	15,613	76	1,197	142
	Grand total . . . . .	55,890	4,294	98,469	14,031	64,860	21,631



EXPORTS AND IMPORTS BY COUNTRY OF CONSIGNMENT AND ORIGIN: DIVISIONS OF THE  
AUSTRALIAN EXPORT AND IMPORT COMMODITY CLASSIFICATIONS, 1969-70—continued  
(\$'000 f.o.b.)

Div. No.	Sweden		Switzerland		United Kingdom		United States of America		U.S.S.R.	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
00	..	..	..	..	3	544	1,197	245	..	..
01	2,765	..	849	14	43,800	728	253,024	77	7,896	..
02	1	141	..	178	44,941	135	1,471	146	..	..
03	4	44	39	..	717	6,541	22,182	838	..	443
04	17	234	445	1	63,394	1,057	144	508	..	..
05	2,871	8	100	36	45,488	894	2,526	4,702	..	14
06	1	2	..	2	32,339	817	24,447	49	..	1
07	..	..	2	39	3	1,112	14	557	..	..
08	..	1	..	40	332	37	205	3,420	..	..
09	19	22	1	81	437	2,004	891	632	..	2
11	3	1	1	13	675	9,693	119	329	..	3
12	..	..	..	19	..	1,345	27	19,241	..	..
21	558	9	63	..	3,331	147	1,656	278	..	159
22	..	..	..	..	294	108	..	1,501	..	..
23	..	..	..	..	57	1,117	60	5,968	..	..
24	..	84	..	..	1,644	85	221	11,086	..	..
25	..	5,848	..	..	..	5	..	8,560	..	..
26	1,071	854	301	2	63,061	4,202	36,635	5,192	43,212	..
27	..	38	..	1	225	1,784	384	5,821	..	..
28	508	..	13	..	34,820	119	36,430	645	..	..
29	53	2	89	33	2,903	1,437	2,214	3,366	..	383
32	..	..	..	..	..	363	..	138	..	..
33	..	7	..	17	1	1,344	31	7,057	..	..
34	..	..	..	..	..	..	..	32	..	..
41	12	..	24	..	1,132	75	265	17	..	..
42	..	235	..	2	..	434	..	1,837	..	..
43	..	55	..	..	160	469	2	304	..	..
51	..	505	6	4,423	362	23,102	62,541	39,858	..	147
52	..	..	..	..	..	17	202	1,615	..	..
53	11	4	30	3,648	193	8,080	545	3,060	..	..
54	6	312	238	10,172	1,238	17,257	122	10,170	..	1
55	..	8	2	932	102	4,871	154	5,216	..	6
56	..	1	..	..	..	25	134	2,567	..	7
57	38	10	..	..	9	2,813	153	1,106	..	..
58	3	176	1	994	260	29,650	64	22,721	..	..
59	1	410	1	336	3,010	18,219	8,290	19,817	..	1
61	58	121	..	7	1,705	2,458	526	672	..	8
62	2	304	10	99	56	14,289	8,781	11,162	..	..
63	1	513	6	20	436	1,294	362	761	..	1
64	17	6,897	..	270	96	13,072	420	19,093	..	..
65	2	564	48	4,885	486	44,997	465	20,137	..	69
66	19	648	132	257	883	20,343	3,112	11,173	..	33
67	37	5,299	24	9	4,452	16,464	10,876	9,469	..	..
68	308	151	3	204	107,462	8,301	26,175	4,441	..	1,374
69	141	3,630	31	1,066	3,105	28,937	2,813	21,389	..	13
71	360	17,975	155	11,013	3,767	196,541	8,034	275,381	1	380
72	228	8,292	66	7,054	2,184	81,931	2,225	54,597	..	16
73	24	3,469	31	303	3,619	145,169	9,555	221,499	..	55
81	..	193	..	9	17	2,017	6	471	..	..
82	..	39	..	6	10	1,401	56	493	..	5
83	..	25	1	7	17	491	110	150	..	..
84	..	..	..	..	..	..	..	..	..	..
85	88	18	52	479	877	7,457	2,321	1,540	..	6
86	..	21	6	242	29	2,513	116	90	..	..
87	..	..	..	..	..	..	..	..	..	..
88	58	622	272	8,377	2,314	30,618	2,637	37,785	..	187
89	118	353	92	1,902	2,695	52,952	4,235	34,830	..	76
9A	75	824	88	1,487	2,967	25,409	4,340	36,853	2	35
	9,478	58,976	3,224	58,679	482,111	837,284	543,513	950,662	51,111	3,426
9B	157	160	232	325	6,119	8,060	12,918	14,583	327	49
	9,635	59,136	3,456	59,004	488,230	845,344	556,431	965,245	51,438	3,475

# VALUE OF EXPORTS AND IMPORTS: AUSTRALIA PROPORTIONS BY COUNTRY 1965-66 TO 1969-70

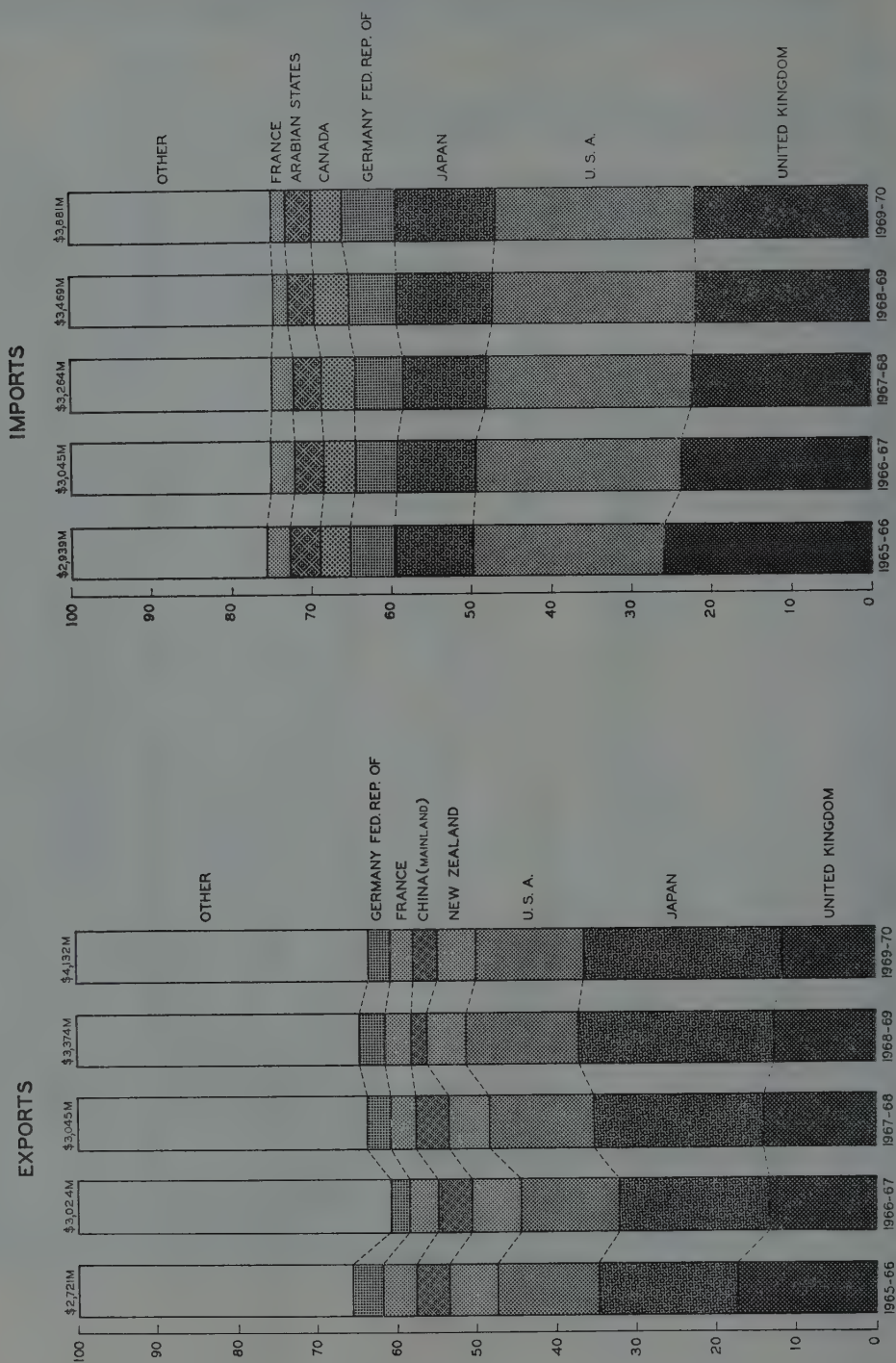


PLATE 27

## Trade with major groups of countries

Australia's trade with major groups of countries is shown in the following table. Particulars of Australia's balance of payments with countries in these groups are shown on page 323.

TRADE OF AUSTRALIA, BY MAJOR GROUPS OF COUNTRIES  
1967-68 TO 1969-70

(\$'000 f.o.b.)

	1967-68	1968-69	1969-70
STERLING AREA			
Exports to—			
United Kingdom . . . . .	426,314	424,836	488,230
Other countries . . . . .	648,022	659,536	851,348
Total . . . . .	1,074,336	1,084,372	1,339,578
Imports from—			
United Kingdom . . . . .	723,010	747,155	845,344
Other countries . . . . .	397,555	450,693	494,297
Total . . . . .	1,120,565	1,197,848	1,339,641
Excess of exports (+) or imports (—) . . . . .	—46,229	—113,476	—63
NON-STERLING COUNTRIES—NORTH AMERICA			
Exports to—			
Canada . . . . .	53,541	67,611	112,773
United States of America(a) . . . . .	413,974	493,238	570,364
Total . . . . .	467,515	560,849	683,137
Imports from—			
Canada . . . . .	140,518	153,084	151,031
United States of America(a) . . . . .	841,233	883,774	965,867
Total . . . . .	981,751	1,036,858	1,116,898
Excess of exports (+) or imports (—) . . . . .	—514,236	—476,009	—433,761
OTHER NON-STERLING COUNTRIES			
Exports to—			
European Economic Community . . . . .	373,194	454,908	497,589
European Free Trade Association(b) . . . . .	32,054	33,755	47,836
Other countries—			
Japan . . . . .	642,072	822,101	1,021,446
Eastern Europe, China (mainland), etc. . . . .	192,019	148,544	217,689
Other . . . . .	263,484	269,736	324,265
Total . . . . .	1,502,823	1,729,044	2,108,825
Imports from—			
European Economic Community . . . . .	426,681	419,249	521,028
European Free Trade Association(b) . . . . .	145,567	147,269	169,695
Other countries—			
Japan . . . . .	343,310	414,676	481,203
Eastern Europe, China (mainland), etc. . . . .	40,753	49,875	54,162
Other . . . . .	205,846	202,730	198,600
Total . . . . .	1,162,157	1,233,799	1,424,688
Excess of exports (+) or imports (—) . . . . .	+340,666	+495,245	+684,137
ALL GROUPS			
Total exports . . . . .	3,044,675	3,374,263	4,131,543
Total imports . . . . .	3,264,473	3,468,505	3,881,227
Excess of exports (+) or imports (—) . . . . .	—219,798	—94,242	+250,316

(a) Includes United States of America, Territories and Dependencies. (b) Other than United Kingdom.



Countries constituting the several groups are listed below.

<b>STERLING AREA—</b>	Tonga	Polynesia (French)	Argentina
Antarctica	Trinidad and Tobago	Reunion and	Bhutan
Bahama Is	Trucial States	Southern Is	Bolivia
Bahrain	United Kingdom	Rwanda	Brazil
Barbados	Virgin Is (British)	St Pierre and	Burma
Bermuda	Western Samoa	Miquelon	Cambodia
Botswana	Windward Is	Senegal	Chile
British Indian Ocean	Zambia	Somalia	China, Republic of
Territory		Surinam	(Taiwan)
Brunei		Tanzania	Colombia
Ceylon	<b>NON-STERLING</b>	Togo	Costa Rica
Christmas Is	<b>COUNTRIES—</b>	Tunisia	Cuba
Cocos Is	<b>NORTH AMERICA—</b>	Turkey	Dominican Republic
Cook Is	Canada	Uganda	Ecuador
Cyprus	United States of	Upper Volta	El Salvador
Falkland Is	America and	Wallis and Futuna Is	Equatorial Guinea,
Fiji	Dependencies	West Indies (French)	Republic of, previously
Gambia	(Guam, Okinawa,		included with Spanish
Ghana	Puerto Rico, Samoa,		Equatorial (West) Africa
Gibraltar	Virgin Is and		
Gilbert and Ellice Is	other U.S. Pacific Is)	<b>EUROPEAN FREE TRADE</b>	Ethiopia
Guyana		<b>ASSOCIATION(a)—</b>	Guatemala
Honduras (British)		Angola	Guinea
Hong Kong	<b>EUROPEAN ECONOMIC</b>	Austria	Haiti
India	<b>COMMUNITY—</b>	Cape Verde Is	Honduras (not British)
Ireland	Antilles (Netherlands)	Denmark	Indonesia
Jamaica	Belgium-Luxembourg	Finland	Iran
Jordan	Burundi	Guinea (Portuguese)	Iraq
Kuwait	Cameroon	Iceland	Israel
Leeward Is	Central African	Macao	Japan
Lesotho	Republic	Mozambique	Korea, Republic of
Libya	Chad	Norway	Laos
Malawi	Congo (Brazzaville)	Portugal	Lebanon
Malaysia	Congo (Kinshasa)	Sweden	Liberia
Maldives Is	Dahomey	Switzerland	Mexico
Malta	France	Timor	Nepal
Mauritius	French Territory of		New Hebrides
Muscat and Oman	the Afar and Issa	<b>EASTERN EUROPE, CHINA</b>	Nicaragua
Nauru, Republic of	Peoples formerly	<b>(MAINLAND), ETC.—</b>	Panama
New Zealand	Somaliland (French)	Albania	Paraguay
Niue and Tokelau Is	Gabon	Bulgaria	Peru
Norfolk Is	Germany, Federal	China (mainland)	Philippines
Pakistan	Republic of	Czechoslovakia	Rhodesia
Papua and New Guinea	Greece	Germany (East)	Saudi Arabia
Qatar	Guiana (French)	Hungary	Spain
Ross Dependency	Italy	Korea (North)	Spanish Sahara, previously
St Helena and	Ivory Coast	Mongolia	included with Spanish
Ascension	Kenya	Poland	Equatorial (West) Africa
Seychelles	Malagasy, Republic of	Romania	Sudan
Sierra Leone	Mali	U.S.S.R.	Syria
Singapore	Mauritania	Vietnam (North)	Thailand
Solomon Is	Morocco		United Arab Republic
South Africa	Netherlands		Uruguay
South West Africa	New Caledonia	<b>OTHER—</b>	Venezuela
South Yemen	Niger	Afghanistan	Vietnam, Republic of
Swaziland	Nigeria	Algeria	Yemen
			Yugoslavia

(a) Other than United Kingdom.

## Trade with the United Kingdom

Since 1908, permanent resident Commissioners appointed by the British Board of Trade have been located in Australia for the purpose of advising manufacturers and merchants in Britain about Australian trade affairs. British Trade Commissioners are located in all Australian Capital Cities except Hobart. From 8 August 1907 the Commonwealth Customs Tariffs have provided preferential rates of customs duties on certain goods the produce or manufacture of the United Kingdom, with the object of assisting the British manufacturer to retain or improve his position in this market in relation to other countries. The main provisions in these Acts relating to preference are dealt with on pages 280-1 in this chapter. For details of exports to and imports from the United Kingdom, by divisions of the Australian Export and Import Commodity Classifications, see the table on page 305.

## Trade with eastern countries

Details of exports to and imports from eastern countries are shown in the following table. Further information for principal eastern countries, by divisions of the Australian Export and Import Commodity Classifications, is shown in the tables on pages 300-5.

**TRADE OF AUSTRALIA WITH EASTERN COUNTRIES, BY COUNTRY OF CONSIGNMENT  
OR ORIGIN, 1967-68 TO 1969-70**

(\$'000 f.o.b.)

Country	Exports			Imports		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Bhutan . . . . .	..	21	..	..	..	..
Brunei . . . . .	9,351	799	8,700	15,410	18,562	14,452
Burma . . . . .	2,797	2,928	3,802	187	125	295
Cambodia . . . . .	254	115	832	29	36	35
Ceylon . . . . .	16,173	15,083	14,718	15,014	15,184	11,321
China (mainland) . . . . .	126,459	67,214	125,815	23,592	29,651	32,082
China, Republic of (Taiwan) . . . . .	20,388	26,415	29,912	8,590	11,787	15,869
Hong Kong . . . . .	59,876	70,973	84,718	36,729	41,075	54,022
India . . . . .	65,466	32,017	40,237	35,296	32,196	31,839
Indonesia . . . . .	13,870	20,665	35,266	55,430	59,956	48,882
Japan . . . . .	642,072	822,101	1,021,446	343,310	414,676	481,203
Korea (North) . . . . .	1,928	5,599	3,688	2	..	2
Korea, Republic of . . . . .	8,417	13,469	12,371	1,556	2,493	2,183
Laos . . . . .	149	114	126	..	1	..
Macao . . . . .	33	39	23	38	61	29
Malaysia . . . . .	56,485	63,670	68,525	28,842	30,022	34,922
Nepal . . . . .	96	26	44	14	21	23
Pakistan . . . . .	5,944	6,905	16,394	14,562	17,068	18,953
Philippines . . . . .	41,722	44,820	55,890	3,555	3,136	4,294
Singapore . . . . .	58,138	63,325	98,469	8,564	12,496	14,031
Thailand . . . . .	23,494	23,872	29,117	1,969	1,932	2,687
Timor . . . . .	262	1,001	554	4	..	4
Vietnam (North) . . . . .	..	..	..	..	..	..
Vietnam, Republic of . . . . .	23,198	31,063	23,193	20	81	30
<b>Total . . . . .</b>	<b>1,176,572</b>	<b>1,312,234</b>	<b>1,673,840</b>	<b>592,713</b>	<b>690,559</b>	<b>767,158</b>

**Ships' and aircraft stores**

Ships' and aircraft stores loaded on overseas ships and aircraft are excluded from exports. The value of these stores is shown in the table below for each of the years 1967-68 to 1969-70.

**STORES LOADED ON BOARD OVERSEAS VESSELS AND  
AIRCRAFT: AUSTRALIA, 1967-68 TO 1969-70**

(\$'000 f.o.b.)

Stores	1967-68	1968-69	1969-70
Cigarettes, cigars and tobacco . . . . .	835	778	774
Fuel, lubricating oil and lubricants . . . . .	33,805	32,513	34,745
Foodstuffs for human consumption—			
Meats . . . . .	3,096	2,578	2,277
Sugar . . . . .	72	48	51
Milk and cream, preserved . . . . .	95	68	68
Butter . . . . .	116	163	169
Cheese . . . . .	88	79	68
Eggs in shell . . . . .	414	361	353
Seafoods . . . . .	661	710	623
Prepared grains . . . . .	224	211	158
Vegetables . . . . .	838	818	666
Fruit . . . . .	432	480	445
Tea . . . . .	18	12	11
Other . . . . .	955	678	711
Fodder . . . . .	64	71	45
Alcoholic beverages . . . . .	1,636	1,684	1,839
Coal . . . . .	6	9	33
Other ships' stores . . . . .	5,438	5,580	7,272
<b>Total . . . . .</b>	<b>48,793</b>	<b>46,841</b>	<b>50,308</b>

## Overseas trade at customs ports

The following table shows the value of exports and imports at customs ports of Australia during the year 1969-70, and the totals for each State and Territory.

OVERSEAS TRADE: CUSTOMS PORTS, AUSTRALIA, 1969-70  
(\$'000 f.o.b.)

Port or customs station	Exports	Imports	Port or customs station	Exports	Imports
<b>New South Wales—</b>			<b>South Australia—continued</b>		
Sydney . . . . .	754,055	1,387,639	Port Lincoln . . . . .	23,076	1,455
Kingsford-Smith airport . . . . .	106,702	166,797	Port Pirie (including Port Germein) . . . . .	98,066	159
Coffs Harbour (including Ballina) . . . . .	601	..	Port Wallaroo . . . . .	14,313	1,554
Botany Bay (Kurnell) . . . . .	2,780	48,970	Whyalla . . . . .	38,085	4,294
Newcastle (including Port Stephens) . . . . .	185,104	44,412	Parcels post, Adelaide . . . . .	(a)	2,710
Port Kembla . . . . .	107,499	34,158	<b>Total, South Australia . . . . .</b>	<b>417,031</b>	<b>201,223</b>
Richmond . . . . .	1,862	8,368			
Parcels post, Sydney . . . . .	(a)	17,101	<b>Western Australia—</b>		
<b>Total, New South Wales . . . . .</b>	<b>1,158,603</b>	<b>1,707,445</b>	Fremantle . . . . .	290,182	143,460
<b>Victoria—</b>			Perth . . . . .	349	3,617
Melbourne . . . . .	788,646	1,148,250	Perth airport . . . . .	10,993	12,586
Melbourne airport . . . . .	5,243	104,011	Kwinana . . . . .	3,700	34,582
Geelong . . . . .	86,719	63,476	Albany . . . . .	24,309	2,924
Portland . . . . .	31,212	6,334	Broome . . . . .	5,890	1,372
Westernport . . . . .	776	12,192	Bunbury . . . . .	15,917	2,904
Parcels post, Melbourne . . . . .	(a)	12,790	Busselton . . . . .	59	..
<b>Total, Victoria . . . . .</b>	<b>912,596</b>	<b>1,347,053</b>	Carnarvon . . . . .	2,007	58
<b>Queensland—</b>			Derby . . . . .	1,724	217
Brisbane . . . . .	343,983	259,242	Esperance . . . . .	43,170	2,502
Brisbane airport . . . . .	7,409	11,311	Exmouth (North West Cape) . . . . .	170	446
Bowen . . . . .	8,451	1	Geraldton . . . . .	40,713	10,060
Bundaberg . . . . .	3,044	64	King Bay (Dampier) . . . . .	116,983	7,453
Cairns (including airport) . . . . .	25,626	2,719	Port Hedland . . . . .	110,397	12,586
Gladstone . . . . .	110,714	6,562	Wyndham . . . . .	6,294	..
Innisfail . . . . .	27,820	2	Yampi Sound (Cockatoo Island) . . . . .	2,170	5,727
Mackay . . . . .	37,530	2,509	Parcels post, Perth . . . . .	(a)	1,805
Maryborough (including Uran- gan) . . . . .	93	325	<b>Total, Western Australia . . . . .</b>	<b>675,027</b>	<b>242,299</b>
Rockhampton (including airport and Port Alma) . . . . .	39,659	850			
Thursday Island . . . . .	3,384	540	<b>Tasmania—</b>		
Townsville (including airport) . . . . .	165,806	6,608	Hobart (including airport) . . . . .	55,358	20,975
Weipa . . . . .	(a)	1,822	Burnie (including airport) . . . . .	30,068	10,838
Parcels post, Brisbane . . . . .	(a)	1,559	Devonport (including airport and Ulverstone) . . . . .	8,670	7,003
<b>Total, Queensland . . . . .</b>	<b>773,519</b>	<b>294,114</b>	Launceston (including airport and Beauty Point) . . . . .	26,608	8,182
<b>South Australia—</b>			Port Latta . . . . .	22,646	..
Port Adelaide (including Sten- house Bay) . . . . .	214,464	163,220	Port Stanley . . . . .	120	..
Adelaide city . . . . .	..	..	Parcels post . . . . .	(b)	(b)
Adelaide airport . . . . .	8,678	8,776	<b>Total, Tasmania . . . . .</b>	<b>143,470</b>	<b>46,998</b>
Port Stanvac . . . . .	437	19,055			
Port Augusta . . . . .	7,444	..	<b>Northern Territory—</b>		
Cape Thevenard . . . . .	6,758	..	Darwin (including Groote Eylandt and Gove) . . . . .	49,725	39,829
Edithburgh . . . . .	75	..			
Ardrossan . . . . .	5,635	..	<b>Australian Capital Territory—</b>		
			Canberra . . . . .	1,571	2,267
			<b>Total . . . . .</b>	<b>4,131,543</b>	<b>3,881,227</b>

(a) Included with main port.

(b) Included with respective port.



### Movement of bullion and specie

The following table shows the values of gold and silver bullion and specie, and of bronze specie, exported from and imported into Australia during each of the years 1967-68 to 1969-70.

#### EXPORTS AND IMPORTS OF BULLION AND SPECIE: AUSTRALIA, 1967-68 TO 1969-70 (\$'000 f.o.b.)

	<i>Exports</i>			<i>Imports</i>		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Gold—Bullion(a) . . .	15,299	22,706	29,367	4,324	3,964	6,709
Specie . . . . .	30	..	6	53	32	40
<i>Total gold</i> . . . . .	<i>15,328</i>	<i>22,706</i>	<i>29,373</i>	<i>4,377</i>	<i>3,996</i>	<i>6,749</i>
Silver—Bullion(a) . . .	22,528	22,677	14,006	152	212	156
Specie . . . . .	949	50	81	162	666	162
<i>Total silver</i> . . . . .	<i>23,477</i>	<i>22,727</i>	<i>14,087</i>	<i>314</i>	<i>878</i>	<i>318</i>
Other (including bronze and cupro-nickel)—Specie .	764	759	1,255	1,537	1,008	1,320
Total—						
Australian Produce . . .	39,554	46,175	44,688	..	..	..
Re-exports . . . . .	16	17	27	..	..	..
<b>Grand total</b> . . . . .	<b>39,570</b>	<b>46,192</b>	<b>44,715</b>	<b>6,228</b>	<b>5,882</b>	<b>8,387</b>

(a) Includes in matte.

The following table shows the exports and imports of bullion and specie to and from various countries during the year 1969-70.

#### EXPORTS AND IMPORTS OF BULLION AND SPECIE, BY COUNTRY OF CONSIGNMENT OR ORIGIN, 1969-70 (\$'000 f.o.b.)

<i>Country</i>	<i>Exports</i>			<i>Imports</i>		
	<i>Bullion</i>	<i>Specie</i>	<i>Total</i>	<i>Bullion</i>	<i>Specie</i>	<i>Total</i>
Fiji . . . . .	10	..	10	3,637	60	3,697
Germany, Federal Republic of .	115	..	115	31	..	31
Hong Kong . . . . .	23,498	..	23,498	..	..	..
Japan . . . . .	4,851	..	4,851	8	..	8
Malaysia . . . . .	..	..	..	..	56	56
New Zealand . . . . .	424	342	766	31	1,132	1,163
Papua and New Guinea . . .	..	430	430	764	..	764
Singapore . . . . .	6,646	469	7,115	..	..	..
Solomon Is . . . . .	..	39	39	..	..	..
Switzerland . . . . .	..	..	..	..	43	43
United Kingdom . . . . .	7,821	21	7,842	2,362	8	2,370
United States of America . .	7	1	8	32	1	33
Other Countries . . . . .	..	40	40	..	22	22
Australia re-imported . . .	..	..	..	..	200	200
<b>Total</b> . . . . .	<b>43,373</b>	<b>1,342</b>	<b>44,715</b>	<b>6,865</b>	<b>1,522</b>	<b>8,387</b>

### Total import clearances, dutiable clearances, and net customs duties collected

The following table shows the value of total import clearances, total dutiable clearances, and the net customs duties collected during each of the years 1965-66 to 1969-70 together with the ratio of total dutiable clearances to total clearances.

#### TOTAL IMPORT CLEARANCES, DUTIABLE CLEARANCES, AND NET CUSTOMS DUTIES 1965-66 TO 1969-70

		1965-66	1966-67	1967-68	1968-69	1969-70
Total import clearances . . . . .	\$'000	2,914,520	3,030,897	3,265,116	3,432,209	3,858,808
Total dutiable clearances . . . . .	„	1,230,459	1,228,320	1,371,780	1,508,391	1,779,110
Total net customs duties collected . . . . .	„	265,590	269,296	306,590	340,940	407,432
Ratio of dutiable clearances to total clearances . . . . .	per cent	42.2	40.5	42.0	43.9	46.1
Ratio of duties collected to dutiable clearances . . . . .	„	21.6	21.9	22.3	22.6	22.9

### Overseas trade in calendar years

For the purpose of comparison with countries which record overseas trade in calendar years, the following table has been compiled to show estimates of Australian exports and imports for each of the calendar years 1966 to 1970.

#### OVERSEAS TRADE IN CALENDAR YEARS, AUSTRALIA, 1966 TO 1970 (\$'000 f.o.b.)

Year	Merchandise		Non-merchandise		Total	
	Exports	Imports	Exports	Imports	Exports	Imports
1966 . . . . .	2,742,315	2,853,925	88,960	41,199	2,831,275	2,895,124
1967 . . . . .	3,004,232	3,082,991	101,181	47,108	3,105,413	3,130,099
1968 . . . . .	3,036,221	3,443,943	112,227	45,143	3,148,448	3,489,086
1969 . . . . .	3,615,710	3,573,713	155,469	52,800	3,771,179	3,626,513
1970 . . . . .	4,131,015	3,997,992	129,752	56,492	4,260,767	4,054,484

## Excise

Although excise goods have no immediate bearing on overseas trade, the rate of excise duty is in some cases related to the import duty on similar goods. Moreover, as the Excise Acts are administered by the Department of Customs and Excise, it is convenient to publish here the quantities of Australian produce on which excise duty has been paid. Particulars of customs and excise revenue are shown in the chapter Public Finance. The following table shows the quantities of spirits, beer, tobacco, etc., on which excise duty was paid in Australia during the years 1968-69 and 1969-70.

QUANTITY OF SPIRITS, BEER, TOBACCO, ETC. ON WHICH EXCISE DUTY WAS PAID: AUSTRALIA, 1968-69 AND 1969-70

Article	1968-69	1969-70	Article	1968-69	1969-70
	'000 gallons	'000 gallons		'000 gallons	'000 gallons
Beer . . . . .	312,505	325,675	Petrol—		
			Aviation gasoline (by-law)(a)	9,707	8,214
			Gasoline(a)	2,013,522	2,102,302
			<i>Total petrol</i>	<i>2,023,229</i>	<i>2,110,516</i>
Spirits—	proof gallons	proof gallons	Mineral turpentine	5	..
Brandy . . . . .	1,044	1,154	Aviation turbine kerosene(a)	129,348	143,612
Gin . . . . .	262	274	Other kerosene	334	..
Whisky . . . . .	327	356	Automotive diesel fuel	172,169	191,119
Rum . . . . .	490	507			
Liqueurs . . . . .	104	111		doz packs	doz packs
Vodka . . . . .	138	160		'000	'000
Flavoured spirituous liquors	16	23	Playing cards	127	136
Other	1	1		60 papers	60 papers
<i>Total spirits (potable)</i>	<i>2,381</i>	<i>2,585</i>		or tubes	or tubes
				'000	'000
Spirits for—			Cigarette papers and tubes	57,493	56,132
Fortifying wine . . . . .	2,817	3,261		8,640	8,640
				matches	matches
Tobacco	'000 lb	'000 lb		'000	'000
	7,053	6,641	Matches	3,668	3,656
				'000 tons	'000 tons
Cigars . . . . .	151	173	Coal	25,771	34,955
				'000 doz	'000 doz
Cigarettes—machine-made	53,477	54,837	Canned fruit	7,676	7,343
				containers	containers

(a) Includes supplies to Commonwealth Government on which excise was paid. During the years 1968-69 and 1969-70 refunds were made on 58,870,000 gallons and 61,592,000 gallons, respectively.

## OVERSEAS INVESTMENT BY PRIVATE INVESTORS

Surveys of overseas investment have been conducted since 1947-48 to obtain particulars of certain types of private capital flows to and from Australia. The surveys, when supplemented by other information, provide statistics of overseas investment in companies in Australia and in Australian public authority securities repayable in Australian currency, as well as statistics of Australian investment in companies overseas and in foreign government securities. Particulars of investment income from most of those classes of investment are also obtained from the surveys.

Certain types of private overseas investment are not included in the statistics which follow. Investment in real estate (except when made through companies) and loans between Australian individuals and non-resident individuals are not covered. Nor are changes in short-term liabilities between exporters and importers in Australia and overseas covered, except in so far as they arise from exports and imports between branches or subsidiaries and their home offices. In this case they are included in the figures of investment in branches or subsidiaries.

In the tables which classify investment in Australia according to country of origin, the investment is shown as an inflow from the country which is the immediate source of the capital. Income payable overseas is classified on a similar basis, i.e. it is classified to the country to which it is directly payable.

Remittances between Australia and overseas by Australian life insurance companies are regarded as capital transactions made to bring assets located in overseas countries into line with commitments in those countries, and are included as a flow of investment between Australia and overseas. Similar considerations apply to overseas life insurance companies with branches in Australia.



The following are explanatory notes relating to some of the terms used in the tables.

*Overseas.* For the purpose of these statistics, Papua and New Guinea and the other external territories under the control of Australia are regarded as overseas countries.

*Companies.* In these statistics the term 'companies' relates to both incorporated and unincorporated businesses.

*Australian branches.* Australian branches of companies incorporated overseas whose net liabilities to home office or whose net profit or loss exceeds \$10,000, or which maintain in Australia a branch register of shares, debentures or unsecured notes.

*Australian subsidiaries.* For the purpose of these statistics an Australian subsidiary is a company in which there is ownership of 25 per cent or more of the company's ordinary shares (or voting stock) by one company or a group of associated companies in one overseas country, or ownership of 50 per cent or more of the company's ordinary shares (or voting stock) by individual persons or individual companies in one overseas country.

*Direct investment.* For the purpose of these statistics direct investment is overseas investment made through a branch or subsidiary (as defined above) by the overseas persons or overseas companies which hold the specified proportions of ordinary shares (or voting stock) in the subsidiary.

*Portfolio investment and institutional loans.* This term relates to investment other than direct investment, including loans raised overseas from financial institutions and other companies which have no direct investment in the borrowing company.

*Undistributed profits.* This term refers, in the case of Australian subsidiaries, to the equity of the overseas parent in the net earnings for taxation purposes of the Australian company, less tax (or tax provision) and less dividends declared. In the case of overseas subsidiaries of Australian companies, this term represents the equity of the Australian parent in the book value of the net earnings of the subsidiary after tax, less dividends paid or payable.

*Unremitted profits.* For these statistics this represents the net earnings of branches during the year, after tax, less remittances by the branches to their home offices during the year of net earnings and interest (irrespective of the period to which the earnings and interest relate). 'Net earnings' of Australian branches of overseas companies are, in general, based on the value of their income for taxation purposes.

The annual bulletin *Insurance and Other Private Finance* and the *Annual Bulletin of Overseas Investment* contain additional figures relating to overseas investment, including a longer range of years covered, and also a more detailed description of the figures.

**Private overseas investment in companies in Australia and investment income payable overseas by companies in Australia.**

The inflow of private overseas investment in Australia since 1965-66 is shown in the next three tables.

**ANNUAL INFLOW OF PRIVATE OVERSEAS INVESTMENT IN COMPANIES IN AUSTRALIA  
BY CATEGORY OF INVESTMENT AND TYPE OF COMPANY(a), 1965-66 TO 1969-70**

(\$ million)

<i>Annual inflow of direct private overseas investment in companies in Australia</i>							
<i>Year</i>	<i>Australian branches</i>		<i>Australian subsidiaries</i>		<i>Total</i>	<i>Portfolio investment and institutional loans(b)</i>	<i>Grand total</i>
	<i>Un-remitted profits</i>	<i>Other direct investment</i>	<i>Undistributed profits</i>	<i>Other direct investment</i>			
1965-66 .	15	86	110	283	493	195	688
1966-67 .	12	94	103	125	334	176	509
1967-68 .	34	110	195	205	544	417	962
1968-69 .	34	148	246	191	619	402	1,021
1969-70 .	48	148	247	296	740	285	1,025

(a) Increases in investment by some overseas investors are offset against withdrawals of investment by other overseas investors.

(b) Partially estimated.

**ANNUAL INFLOW OF PRIVATE OVERSEAS INVESTMENT IN  
COMPANIES IN AUSTRALIA, BY DOMICILE OF INVESTOR AND  
CATEGORY OF INVESTMENT(a), 1965-66 TO 1969-70**  
(\$ million)

Year	United Kingdom	U.S.A.	Canada	Japan	E.E.C.(b)	Other countries	Total
<b>DIRECT INVESTMENT</b>							
Undistributed income(c)—							
1965-66 . . . .	63	52	2	..	2	7	125
1966-67 . . . .	60	47	4	..	-3	6	115
1967-68 . . . .	116	88	16	2	..	8	229
1968-69 . . . .	143	118	12	3	-4	8	280
1969-70 . . . .	164	109	13	-2	1	9	295
Other direct investment—							
1965-66 . . . .	165	133	9	..	24	38	369
1966-67 . . . .	32	157	5	7	13	4	219
1967-68 . . . .	6	249	19	13	20	9	315
1968-69 . . . .	70	186	7	15	31	30	339
1969-70 . . . .	86	253	22	21	31	31	445
<b>PORTFOLIO INVESTMENT AND INSTITUTIONAL LOANS(d)</b>							
1965-66 . . . .	39	122	3	(e)	(e)	31	195
1966-67 . . . .	27	73	5	(e)	(e)	70	176
1967-68 . . . .	268	56	3	(e)	(e)	91	417
1968-69 . . . .	260	11	4	(e)	(e)	127	402
1969-70 . . . .	104	77	-10	(e)	(e)	115	285
<b>TOTAL</b>							
1965-66 . . . .	266	307	14	(e)	(e)	101	688
1966-67 . . . .	119	277	15	(e)	(e)	98	509
1967-68 . . . .	389	393	38	(e)	(e)	141	962
1968-69 . . . .	472	314	24	(e)	(e)	211	1,021
1969-70 . . . .	354	439	25	(e)	(e)	207	1,025

(a) See footnote (a) to preceding table. (b) Includes France, West Germany, Italy, Netherlands, Belgium, Luxembourg, Greece and Turkey. (c) Unremitted profits of Australian branches plus undistributed profits of Australian subsidiaries. (d) Partially estimated. (e) Not available—included in 'Other countries'.

Minus sign (-) denotes outflow.

**ANNUAL INFLOW OF DIRECT PRIVATE OVERSEAS INVESTMENT IN  
COMPANIES IN AUSTRALIA, BY INDUSTRY IN WHICH CAPITAL  
INVESTED, 1965-66 TO 1969-70**  
(\$ million)

Year	Primary production	Manu- facturing	Other industries	Total
1965-66 . . . .	128	186	179	493
1966-67 . . . .	114	152	68	334
1967-68 . . . .	176	214	154	544
1968-69 . . . .	262	181	177	619
1969-70 . . . .	265	187	287	740

The next three tables show investment income payable overseas by companies in Australia.

**INVESTMENT INCOME PAYABLE OVERSEAS BY COMPANIES IN AUSTRALIA  
BY CATEGORY OF INCOME AND TYPE OF COMPANY, 1965-66 TO 1969-70**

(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>Income payable on direct investment—</b>					
Australian branches—					
Unremitted profits . . . . .	15	12	34	34	48
Remitted profits and interest . . . . .	42	44	44	68	72
Australian subsidiaries—					
Undistributed profits . . . . .	110	103	195	246	247
Distributed profits—					
Dividends payable . . . . .	79	100	104	106	140
Interest remitted . . . . .	13	17	21	31	48
<b>Total, income payable on direct investment</b>	<b>260</b>	<b>276</b>	<b>399</b>	<b>485</b>	<b>555</b>
<b>Income payable on portfolio investment and institutional loans—</b>					
Dividends . . . . .	35	39	40	48	54
Interest . . . . .	14	22	25	36	37
<b>Total, income payable on portfolio investment, etc.</b>	<b>49</b>	<b>60</b>	<b>65</b>	<b>84</b>	<b>91</b>
<b>Grand total . . . . .</b>	<b>309</b>	<b>337</b>	<b>464</b>	<b>569</b>	<b>646</b>

**INVESTMENT INCOME PAYABLE OVERSEAS BY COMPANIES IN AUSTRALIA BY COUNTRY  
TO WHICH PAYABLE AND CATEGORY OF INCOME 1965-66 TO 1969-70**

(\$ million)

Year	United Kingdom	U.S.A.	Canada	Japan	E.E.C. (a)	Other countries	Total
<b>DIRECT INVESTMENT INCOME</b>							
<b>Undistributed income(b)—</b>							
1965-66 . . . . .	63	52	2	..	2	7	125
1966-67 . . . . .	60	47	4	..	-3	6	115
1967-68 . . . . .	116	88	16	2	..	8	229
1968-69 . . . . .	143	118	12	3	-4	8	280
1969-70 . . . . .	164	109	13	-2	1	9	295
<b>Distributed income on direct investment(c)—</b>							
1965-66 . . . . .	78	48	3	..	1	5	135
1966-67 . . . . .	90	60	2	..	2	8	162
1967-68 . . . . .	82	72	4	..	4	7	169
1968-69 . . . . .	87	95	6	(d)	(d)	17	205
1969-70 . . . . .	99	134	7	(d)	(d)	20	260
<b>INCOME PAYABLE ON PORTFOLIO INVESTMENT AND INSTITUTIONAL LOANS</b>							
1965-66 . . . . .	23	13	..	(d)	(d)	14	49
1966-67 . . . . .	26	17	1	(d)	(d)	17	60
1967-68 . . . . .	27	19	1	(d)	(d)	18	65
1968-69 . . . . .	35	24	1	(d)	(d)	23	84
1969-70 . . . . .	37	27	1	(d)	(d)	26	91
<b>TOTAL</b>							
1965-66 . . . . .	164	112	5	(d)	(d)	28	309
1966-67 . . . . .	175	124	7	(d)	(d)	30	337
1967-68 . . . . .	225	179	21	(d)	(d)	39	464
1968-69 . . . . .	265	237	19	(d)	(d)	47	569
1969-70 . . . . .	300	270	22	(d)	(d)	54	646

(a) Includes France, West Germany, Italy, Netherlands, Belgium, Luxembourg, Greece and Turkey. (b) Unremitted profits of Australian branches plus undistributed profits of Australian subsidiaries. (c) Consists of remitted profits and interest of Australian branches, distributed profits and remitted interest of Australian subsidiaries. (d) Not available—  
included in 'Other countries'.



**INCOME PAYABLE OVERSEAS ON DIRECT INVESTMENT BY  
COMPANIES IN AUSTRALIA, BY INDUSTRY IN WHICH CAPITAL  
INVESTED, 1965-66 TO 1969-70**

(\$ million)

Year	Primary production	Manu- facturing	Other industries	Total
1965-66	25	161	74	260
1966-67	29	168	79	276
1967-68	54	222	122	399
1968-69	88	242	154	485
1969-70	119	260	176	555

**Australian investment in companies overseas and investment income receivable from companies overseas**

The outflow of Australian investment in companies since 1965-66 and a classification by country in which the capital was invested are shown in the following two tables.

**ANNUAL OUTFLOW OF PRIVATE AUSTRALIAN INVESTMENT IN COMPANIES OVERSEAS  
BY CATEGORY OF INVESTMENT AND TYPE OF COMPANY(a), 1965-66 TO 1969-70**

(\$ million)

<i>Annual outflow of direct private Australian investment in companies overseas</i>							<i>Portfolio investment and institutional loans</i>	<i>Grand total</i>
<i>Year</i>	<i>Overseas branches</i>		<i>Overseas subsidiaries</i>		<i>Total</i>			
	<i>Unre-mitted profits</i>	<i>Other direct investment</i>	<i>Undis-tributed profits</i>	<i>Other direct investment</i>				
1965-66	2	4	16	17	38	-5	33	
1966-67	-1	14	15	9	37	-7	29	
1967-68	2	7	18	21	47	-6	41	
1968-69	-1	15	21	35	70	-9	60	
1969-70	1	4	24	117	146	2	148	

(a) Increases in investment by some Australian investors are offset against withdrawals of investment by other Australian investors.

Minus sign (-) denotes inflow.

**ANNUAL OUTFLOW OF PRIVATE AUSTRALIAN INVESTMENT IN COMPANIES OVERSEAS  
BY COUNTRY IN WHICH CAPITAL INVESTED(a), 1965-66 TO 1969-70**

(\$ million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	Papua and New Guinea(b)	Other countries	Total
1965-66	2	14	1	11	6	33
1966-67	-4	8	..	18	7	29
1967-68	..	8	1	21	11	41
1968-69	6	14	-2	35	7	60
1969-70	29	17	7	88	7	148

(a) Increases in investment by some Australian investors are offset against withdrawals of investment by other Australian investors. (b) Excludes portfolio investment and institutional loans.

Minus sign (-) denotes inflow.

The next two tables show income from direct investment receivable by Australian companies from companies overseas, and the countries from which it is receivable.

**INCOME FROM DIRECT INVESTMENT RECEIVABLE BY AUSTRALIAN COMPANIES FROM COMPANIES OVERSEAS, BY TYPE OF COMPANY AND CATEGORY OF INCOME, 1965-66 TO 1969-70**

(\$ million)

Year	Overseas branches		Overseas subsidiaries		Total
	Unre-mitted profits (net)	Remitted profits and interest	Undis-tributed profits (net)	Dividends and interest receivable	
1965-66	2	4	16	16	38
1966-67	-1	5	15	21	39
1967-68	2	6	18	19	45
1968-69	-1	5	21	24	49
1969-70	1	5	24	26	56

**INCOME FROM DIRECT INVESTMENT RECEIVABLE BY AUSTRALIAN COMPANIES FROM COMPANIES OVERSEAS, BY COUNTRY FROM WHICH RECEIVABLE 1965-66 TO 1969-70**

(\$ million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	Papua and New Guinea(a)	Other countries	Total
1965-66	1	16	1	6	12	38
1966-67	1	18	1	6	13	39
1967-68	3	18	1	9	14	45
1968-69	2	17	2	12	17	49
1969-70	4	17	1	16	19	56

(a) Excludes portfolio investment and institutional loans.

**Net annual flow of investment**

The net annual flow of investment between Australia and overseas, and its classification by country, are shown in the following two tables. In addition to private overseas investment, the annual inflow of overseas investment in Australian public authority securities and net overseas remittances by life insurance companies have been incorporated in both tables.

**NET ANNUAL FLOW OF INVESTMENT BETWEEN AUSTRALIA AND OVERSEAS COUNTRIES(a)**

1965-66 TO 1969-70

(\$ million)

Year	Annual inflow of investment	Annual outflow of investment	Net annual flow
1965-66	662	27	635
1966-67	532	27	505
1967-68	1,109	36	1,073
1968-69	1,157	50	1,108
1969-70	909	149	760

(a) Increases in investment by some investors are offset against withdrawals of investment by other investors.

**NET ANNUAL FLOW OF INVESTMENT BETWEEN AUSTRALIA  
AND OVERSEAS COUNTRIES, BY COUNTRY, 1965-66 TO 1969-70**  
(\$ million)

Year	United Kingdom	U.S.A. and Canada	Other countries	I.B.R.D. (a)	Net annual flow
1965-66 . . .	230	343	69	-7	635
1966-67 . . .	57	396	75	-23	505
1967-68 . . .	355	610	131	-23	1,073
1968-69 . . .	451	379	301	-24	1,108
1969-70 . . .	236	417	127	-19	760

(a) Particulars are not available of the domicile of securities issued to the International Bank for Reconstruction and Development.

Minus sign (-) denotes outflow.

### BALANCE OF PAYMENTS

Estimates of a country's balance of payments are prepared for the purpose of providing a systematic record in money terms of the economic transactions which take place over a period between that country and all other countries. Such records are essential to the examination of influences which external factors have on the domestic economy. The Australian economy is subject to fairly large fluctuations in export income, and it is also affected in important respects by variations in the level of foreign investment and the demand for imports. Consequently, these estimates have always assumed particular importance in this country.

Official estimates of Australia's balance of payments covering the period 1928-29 to 1930-31 were included in the Appendix to Year Book No. 24, 1931. Except for the war years (1939 to 1945), estimates have since been published annually. Detailed estimates are currently provided twice yearly in the form of a mimeographed publication *Balance of Payments*. This publication brings the estimates forward to the end of the most recent financial year or half-year and, together with a printed volume *The Australian Balance of Payments, 1928-29 to 1950-51*, provides also a description of the various items included and the sources from which the information is obtained. A summarised statement of the principal current account items and capital movements is prepared and issued on a quarterly basis in the *Balance of Payments—Quarterly Summary*.

In the form of presentation adopted for the Australian balance of payments estimates a basic distinction is made between 'current account' and 'capital account' transactions. Current account transactions may be defined as those involving changes in the ownership of goods or the rendering of services between residents of Australia and the rest of the world and include such items as exports, imports, shipping freights, dividends, profits and interest, travel, and government expenditure. The current account also includes the value of transfers in the form of gifts in cash or kind made or received by residents of Australia, both private and government, to or from the rest of the world. Capital account transactions may be defined as those involving claims to money and titles of investment between residents of one country and those of another country and include government loan-raising operations overseas, investment by overseas residents in Australian companies, the investment of Australian residents in companies overseas, and transactions involving changes in the overseas assets and liabilities of certain Australian marketing authorities.

By definition, the balance of payments on current account and the balance of payments on capital account during a given period must exactly offset one another. Errors and omissions, however, occur in the estimation of the amounts involved in various items in both the current and capital accounts, and, in addition, there are differences in timing between the statistical recording of trade and invisible transactions and the relevant foreign exchange transactions. It is therefore necessary to introduce into the estimates a 'balancing item' which allows the identity between the current and capital account balances to be preserved. The 'balancing item' is included in the capital account, but, as mentioned above, it includes discrepancies in the current account and does not, as is frequently supposed, include only errors, omissions and timing differences related to capital transactions.

Details of the estimates are assembled from a variety of sources of which the following are the more important: (i) statistics of exports and imports obtained from Australian trade statistics; (ii) details of the import valuation adjustment obtained from a sample of the invoices submitted to the Department of Customs and Excise in respect of imports into Australia; (iii) information on particular invisible current account items and capital movements obtained by regular inquiry from private organisations and government departments; (iv) details of receipts and payments of foreign exchange provided by the banking system; (v) information on profits remitted, undistributed income and private investment in companies provided by statistics of overseas investment collected by this



Bureau; (vi) information on freight on imports and other items concerned with overseas transportation obtained from a sample of the invoices submitted to the Department of Customs and Excise in respect of imports into Australia and from a survey conducted by this Bureau of overseas shipping and airline operations; and (vii) information supplied by the Reserve Bank of Australia on gold and net foreign assets of official and banking institutions.

#### Current account

The balance of payments on current account is arranged to show a series of credit items and a corresponding series of debit items. Primarily, entries on the credit side include all current transactions which result in receipts of foreign exchange (for goods and services, property income or transfers), and on the debit side the similar transactions which result in payments of foreign exchange. The principal exceptions to this rule are the amounts shown for undistributed income and where debts incurred for current account items, principally goods, are subsequently capitalised. In respect of these amounts no movements of foreign exchange take place, the amounts concerned being treated as credits or debits in the relevant sections of the current account, and as corresponding outflows or inflows in the relevant sections of the capital account. A further exception occurs in the case of transfers in kind where no foreign exchange movement takes place. The values of transfers received or provided in kind are shown as credits or debits respectively.

The largest items shown in the current account are exports and imports, and the difference between them represents the balance of trade. This is usually the most variable relationship in the balance of payments and is, therefore, a most important one. *For balance of payments purposes, certain adjustments are made to the recorded trade statistics.* Briefly, these adjustments are made to exclude those transactions for which there is no change of ownership between residents and non-residents of Australia and to include certain transactions for which there has been a change of ownership but for which customs entries are not required. In addition, a valuation adjustment is made to the recorded import statistics in order to remove the overstatement which results from the basis of valuation for customs duty. A full description of the adjustments was provided in the Appendix to the publication *Balance of Payments, 1968-69*. A full evaluation of the overall position on current account, however, occurs only after the invisible items have been taken into account. In value terms the most important of these are the transportation items. Entries appear on both the debit and credit sides, the principal component on the debit side being freight payable overseas on imports into Australia. The principal component on the credit side is expenditure by overseas carriers, which represents mainly overseas ships' expenditure for stevedoring, port charges, etc. incurred in loading and discharging goods at Australian ports, and stores purchased in Australia. The items next in importance are those concerning income from property. Debit entries under this heading include dividends, profits, interest and royalties payable overseas, while the credit entries include similar details of amounts receivable by Australian residents. These items include undistributed income for which, as mentioned above, no monetary payments occur. The remaining items are smaller than those mentioned above, and include travel, government transactions, transfers (including foreign aid made available by the Australian Government), and, on the credit side, the net value of Australian gold production.

#### Capital account

In the capital account, transactions are recorded on a net basis; that is, according to the net effect of all debit and credit entries relating to each item. Thus entries on the credit side represent a net increase in non-residents' assets in Australia or a net decrease in Australian assets overseas, while debit entries represent a net decrease in non-residents' assets in Australia or a net increase in Australian assets overseas.

Capital account transactions are also grouped according to the sector of the Australian party to the transactions. The government sector, therefore, includes all capital transactions of central, State, local and semi-government authorities with the exception of transactions of monetary institutions (which are included in the monetary sector), while the private sector covers transactions of all resident individuals and private institutions (again, excepting monetary institutions). The monetary sector covers all banking institutions, including government-owned banks. Transactions of the monetary sector are further sub-divided into those of official and 'other' monetary institutions. Transactions of official institutions include changes in Australia's official reserve assets (consisting of gold, foreign exchange, the I.M.F. gold tranche and special drawing rights in the I.M.F.) and transactions between the Reserve Bank of Australia and foreign central monetary authorities and the I.M.F. Also included is an item, *18.4 Allocation of Special Drawing Rights*. This is the counterpart to the change in official reserve assets due to the allocation to Australia of S.D.R.s by the I.M.F. Such an entry is necessary in this case because without it there would be no corresponding credit to the increase in assets (debit) and the allocation would be reflected in an offsetting movement in the balancing item. 'Other' monetary institutions includes all other transactions of Australian monetary institutions.

In the government sector the most important items include transactions by non-residents in government securities domiciled overseas and in Australia and transactions involving changes in Australia's assets with and liabilities to international non-monetary institutions such as the International Bank for Reconstruction and Development and the Asian Development Bank. Other government transactions are largely a reflection of the net effect on the balance of payments of leads and lags between payments made overseas for items of equipment for the defence services or government airlines and the delivery of the equipment. In periods where payments exceed the value of deliveries a net debit results; in periods where the value of deliveries exceeds payments a net credit is recorded.

In the private sector the most important items are overseas investment in Australian companies, Australian investment in companies overseas, and the transactions of marketing authorities. The figures for marketing authorities represent changes in the estimated value of commodity stocks held overseas by, or in amounts owed by overseas debtors to, the principal Australian marketing authorities.

In the monetary sector the most important item is that which shows the net change in Australia's official reserve assets.

The balancing item includes errors and omissions and timing differences, referred to on pages 319-20.

#### Tables—Balance of payments

The following tables show, for the three years 1967-68 to 1969-70, particulars of:

- (i) the balance of payments; and
- (ii) the balance of payments on current account, by major groups of countries.

#### BALANCE OF PAYMENTS: AUSTRALIA, 1967-68 TO 1969-70

(\$ million)

	1967-68		1968-69		1969-70	
	Credit	Debit	Credit	Debit	Credit	Debit
<b>CURRENT ACCOUNT</b>						
<b>Goods—</b>						
1 Exports f.o.b.(a)	2,942	..	3,217	..	3,964	..
2 Imports f.o.b.(a)	..	3,159	..	3,203	..	3,554
<i>Balance of trade</i>	..	218	14	..	410	..
<b>Invisibles—</b>						
3 Gold production	22	..	20	..	18	..
4 Transportation—						
4.1 Freight payable overseas(b)	..	365	..	376	..	398
4.2 Expenditure of overseas carriers	245	..	263	..	297	..
4.3 Other transportation	117	271	128	308	148	342
5 Travel	88	140	108	150	123	175
6 Government—						
6.1 Australian government—						
6.11 Defence expenditure	..	57	..	65	..	72
6.12 Other expenditure	..	38	..	46	..	52
6.13 Services to non-residents	34	..	39	..	40	..
6.2 Foreign governments' expenditure	41	..	41	..	45	..
7 Miscellaneous—						
7.1 Business expenses	36	51	41	64	58	78
7.2 Other	33	46	35	40	50	66
8 Property income—						
8.1 Direct investment—						
8.11 Undistributed	20	227	20	284	23	285
8.12 Distributed	25	169	29	202	29	258
8.2 Interest on government loans	..	76	..	83	..	89
8.3 Royalties and copyrights	6	64	7	63	7	68
8.4 Other	79	65	95	84	93	90
9 Government transfers—						
9.1 Papua-New Guinea	..	103	..	106	..	116
9.2 Other foreign aid	..	51	..	54	..	64
10 Private transfers—						
10.1 Migrants' funds	116	28	122	29	133	41
10.2 Other	41	56	42	60	49	71
<i>Balance on current account</i>	..	1,123	..	1,009	..	743

For footnotes see next page.

BALANCE OF PAYMENTS: AUSTRALIA, 1967-68 TO 1969-70—*continued*

(\$ million)

	1967-68		1968-69		1969-70	
	Credit	Debit	Credit	Debit	Credit	Debit
CAPITAL ACCOUNT (NET)						
Government (non-monetary)—						
11 Government Securities—						
11.1 Domiciled overseas . . . .	134	..	138	..	..	121
11.2 Domiciled in Australia . . .	14	..	..	..	4	..
12 International non-monetary institutions	..	11	..	10	..	7
13 Other government transactions . .	..	49	..	57	..	53
Private (non-monetary)—						
14 Overseas investment in Australian companies—						
14.1 Direct investment—						
14.11 Undistributed income . . . .	227	..	284	..	285	..
14.12 Other . . . . .	305	..	317	..	421	..
14.2 Portfolio investment and institutional loans . . . . .	416	..	402	..	273	..
15 Australian investment overseas—						
15.1 Direct investment—						
15.11 Undistributed income . . . .	..	20	..	20	..	23
15.12 Other . . . . .	..	30	..	54	..	124
15.2 Portfolio investment . . . . .	6	..	10	..	..	15
16 Other private investment . . . .	5	..	11	..	11	..
17 Marketing authorities . . . . .	33	..	28	..	..	47
Monetary—						
18 Official monetary institutions—						
18.1 Changes in liabilities—						
18.11 Use of I.M.F. credit . . . .	..	..	..	..	..	..
18.12 Other . . . . .	3	..	6	..	5	..
18.2 Changes in official reserve assets	..	(c)73	..	143	..	118
18.3 Other transactions . . . . .	..	..	14	..	8	..
18.4 Allocation of Special Drawing Rights . . . . .	..	..	..	..	75	..
19 Other monetary institutions—						
19.1 Changes in liabilities . . . .	43	..	..	5	31	..
19.2 Changes in assets—						
19.21 Advances to non-residents . .	..	1	..	1	..	1
19.22 Other foreign assets . . . .	..	(c)8	..	26	..	6
Balancing item . . . . .	130	..	115	..	145	..
Balance on capital account . . . .	1,123	..	1,009	..	743	..

(a) The amounts shown represent the recorded trade figures adjusted for balance of payments purposes. Adjustments affect timing, coverage and valuation. (b) Total freight and insurance on imports, whether payable overseas or in Australia, is estimated at \$398 million in 1967-68, \$414 million in 1968-69, and \$443 million in 1969-70. (c) Excludes the effects of the November 1967 devaluation of the pound sterling and other currencies which reduced the Australian dollar equivalents of official reserve assets and other foreign assets by \$111 million and \$2 million respectively.



**BALANCE OF PAYMENTS ON CURRENT ACCOUNT BY MAJOR GROUPS  
OF COUNTRIES: AUSTRALIA 1967-68 TO 1969-70**  
(\$ million)

	1967-68	1968-69	1969-70
<b>EXPORTS f.o.b.(a)—</b>			
Sterling Area—			
United Kingdom . . . . .	423	416	483
Other . . . . .	587	579	753
Non-sterling Area—			
North America . . . . .	461	550	663
European Economic Community . . . . .	382	448	496
European Free Trade Association(b) . . . . .	31	33	40
Japan . . . . .	639	815	1,014
Eastern Europe, China (mainland), etc. . . . .	192	149	217
Other . . . . .	228	228	299
<i>Total exports</i> . . . . .	<i>2,942</i>	<i>3,217</i>	<i>3,964</i>
<b>IMPORTS f.o.b.(a)—</b>			
Sterling Area—			
United Kingdom . . . . .	664	693	773
Other . . . . .	360	416	455
Non-sterling Area—			
North America . . . . .	1,029	928	980
European Economic Community . . . . .	403	387	464
European Free Trade Association(b) . . . . .	134	137	160
Japan . . . . .	330	392	472
Eastern Europe, China (mainland), etc. . . . .	40	49	53
Other . . . . .	199	202	196
<i>Total imports</i> . . . . .	<i>3,159</i>	<i>3,203</i>	<i>3,554</i>
<b>INVISIBLES (NET)—</b>			
Sterling Area—			
United Kingdom . . . . .	-297	-355	-390
Other . . . . .	-135	-142	-164
Non-sterling Area—			
North America . . . . .	-281	-315	-337
European Economic Community . . . . .	-82	-88	-118
European Free Trade Association(b) . . . . .	-35	-33	-41
Japan . . . . .	3	..	-3
Eastern Europe, China (mainland), etc. . . . .	-4	-6	-3
Other . . . . .	-78	-85	-100
International agencies . . . . .	-20	-18	-16
Gold production . . . . .	22	20	18
<i>Total invisibles (net)</i> . . . . .	<i>-906</i>	<i>-1,023</i>	<i>-1,154</i>
<b>BALANCE ON CURRENT ACCOUNT—</b>			
Sterling Area—			
United Kingdom . . . . .	-538	-632	-680
Other . . . . .	92	20	134
Non-sterling Area—			
North America . . . . .	-849	-693	-655
European Economic Community . . . . .	-104	-26	-86
European Free Trade Association(b) . . . . .	-137	-137	-161
Japan . . . . .	311	423	538
Eastern Europe, China (mainland), etc. . . . .	148	94	161
Other . . . . .	-49	-59	2
International agencies . . . . .	-20	-18	-16
Gold production . . . . .	22	20	18
<i>Total balance on current account</i> . . . . .	<i>-1,123</i>	<i>-1,009</i>	<i>-743</i>

(a) The amounts shown represent the recorded trade figures adjusted for balance of payments purposes. Adjustments affect timing, coverage and valuation. (b) Other than the United Kingdom.

Minus sign (—) denotes deficit.

#### International reserves

The following table shows the total gold and net foreign assets of official and banking institutions as at 30 June 1968, 1969 and 1970.

**GOLD AND NET FOREIGN ASSETS  
OFFICIAL AND BANKING INSTITUTIONS, 1968 TO 1970**

(Source: Reserve Bank of Australia)

(\$ million)

	30 June		
	1968	1969	1970
Official reserve assets—			
Gold . . . . .	230	231	241
Special drawing rights . . . . .	..	..	79
I.M.F. gold tranche . . . . .	249	204	217
Foreign exchange—			
United States dollars . . . . .	189	368	371
Sterling . . . . .	605	586	617
Others . . . . .	5	32	14
<i>Total</i> . . . . .	1,277	1,420	1,538
Other foreign assets (net) . . . . .	68	94	100
<i>Total</i> . . . . .	1,345	1,514	1,638

**Indexes of values of exports and imports at constant prices**

The following tables show annual indexes of the values of Australian exports and imports of merchandise at average 1966-67 prices. A description of these measures is given in the first issue of the bulletin *Exports and Imports of Merchandise at Constant Prices* (publication reference No. 8.21) published on 10 October 1968.

**EXPORTS OF MERCHANDISE, 1960-61 TO 1969-70**

**Indexes of Values at Average 1966-67 Prices**

(Base: Year 1966-67 = 100)

	<i>Food and live animals</i>					<i>Metal manu- factures, machinery, transport equipment</i>			<i>All exports of merchandise (a)</i>
	<i>Meat and meat preparations</i>	<i>Cereal and cereal preparations</i>	<i>Other (dairy produce, fruit, sugar, etc.)</i>	<i>Total food and live animals</i>	<i>Wool and sheep- skins</i>	<i>Metal- liferous ores and metal scrap</i>	<i>Other exports</i>		
Percentage of total value of exports in 1966-67(b)	9.5	15.8	12.5	37.8	29.7	5.6	14.2	12.7	100.0
1960-61 . . . . .									69
1961-62 . . . . .									79
1962-63 . . . . .				Not available					77
1963-64 . . . . .									90
1964-65 . . . . .									89
1965-66 . . . . .									90
1966-67 . . . . .	100	100	100	100	100	100	100	100	100
1967-68 . . . . .	100	94	99	97	102	147	100	121	105
1968-69 . . . . .	98	80	102	92	107	211	116	147	114
1969-70 . . . . .	132	106	100	111	115	302	151	174	136

**IMPORTS OF MERCHANDISE, 1960-61 TO 1969-70**

**Indexes of Values at Average 1966-67 Prices**

(Base: Year 1966-67 = 100)

	<i>Food, beverages, and tobacco</i>		<i>Fuels</i>	<i>Basic materials</i>	<i>Chemicals (including plastics)</i>	<i>Textiles, fabrics, etc.</i>	<i>Metal manu- factures, machinery, transport equipment</i>		<i>All imports of merchandise (a)</i>
Percentage of total value of imports in 1966-67(b)	5.2	8.2		7.4	9.9	8.0	43.3	18.0	100.0
1960-61 . . . . .									75
1961-62 . . . . .									61
1962-63 . . . . .				Not available					73
1963-64 . . . . .									81
1964-65 . . . . .									98
1965-66 . . . . .									98
1966-67 . . . . .	100	100		100	100	100	100	100	100
1967-68 . . . . .	99	100		107	109	107	111	111	109
1968-69 . . . . .	110	105		106	123	114	116	121	116
1969-70 . . . . .	116	111		112	132	122	127	137	126

(a) The series shown for years prior to 1966-67 are not strictly comparable to the series shown from 1966-67 onwards (see the bulletin referred to in the headnote to these two tables). (b) These percentages may be used in analysing the contribution of each group to movements in the total index.

## CHAPTER 12

### TRANSPORT, COMMUNICATION AND TRAVEL

The statistics in this chapter relate in the main to the year 1969-70, with comparisons restricted to a few recent years. More detailed figures and particulars for earlier years are included in the annual bulletins, *Transport and Communication*, *Commonwealth Finance*, and *State, Territory and Local Government Authorities' Finance and Government Securities*, and in the annual mimeographed statement *Motor Vehicle Registrations*. Current information on subjects dealt with in this chapter appears in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, *Overseas Shipping Cargo* (quarterly), *Motor Vehicle Registrations* (monthly) and two preliminary monthly statements *Registrations of New Motor Vehicles*, *Road Traffic Accidents involving Casualties* (quarterly), *Road Accident Fatalities* (monthly), and *Overseas Arrivals and Departures* (monthly and quarterly). Greater detail on the latter subject is contained in the annual bulletin *Demography*.

Information additional to that contained in Bureau publications is available in the annual reports and other statements of the Department of Shipping and Transport, the various harbour boards and trusts, the several Government railways authorities, the Department of Civil Aviation, the Postmaster-General's Department, the Overseas Telecommunications Commission, the Australian Broadcasting Control Board, and the Australian Broadcasting Commission.

#### THE AUSTRALIAN TRANSPORT ADVISORY COUNCIL AND ITS STANDING COMMITTEES

The Australian Transport Advisory Council, established April 1946, comprises the Commonwealth Minister for Shipping and Transport as Chairman, the Commonwealth Minister for the Interior and each State Minister for Transport. The administration of the Council and the committees it has established is the responsibility of the Commonwealth Department of Shipping and Transport. The general practice is that the Council convenes twice a year, the meetings moving successively from one capital city to another. The Council primarily considers policy matters relating to transport operation, co-ordination and development.

The regulation of, and the executive responsibility for transport is shared between the Commonwealth and State Governments. The Australian Transport Advisory Council is the meeting ground of Commonwealth and States at a ministerial level and provides an effective means of inviting discussion and reaching, by way of mutual consent and understanding, a uniformity of approach towards transport administrative procedures and policy. It also provides a means of reviewing and discussing national solutions of pressing transport problems and the rectification of transport deficiencies generally.

Some of the Council's most useful work has been accomplished through the agency of committees established by the Council from time to time. Some committees are of a semi-permanent nature. They were established to initiate discussion and action on transport problems referred by member Ministers and other authorities and to undertake specialised work. The current committees are: The Standing Committee of Advisers, The Advisory Committee on Safety in Vehicle Design, The Advisory Committee on Vehicle Performance, The Advisory Committee on Road User Performance and Traffic Codes, The Advisory Committee on Transport of Dangerous Goods, and The Publicity Advisory Committee on Education in Road Safety. Advisory committees of an ad hoc nature are also created as the need arises, e.g. The Air Pollution Committee, The Air Cushion Vehicle Committee.

### SHIPPING

#### Control of shipping

##### Commonwealth navigation and shipping legislation

For an outline of the development and scope of Commonwealth legislation, see Year Book No. 55, pages 366-7.



*Commonwealth Acts connected with shipping are: the Navigation Act 1912–1970, the Sea Carriage of Goods Act 1924, the Seamen's Compensation Act 1911–1971, the Seamen's War Pensions and Allowances Act 1940–1971, the Pollution of the Sea by Oil Act 1960–1965, the Australian Coastal Shipping Commission Act 1956–1969, the Australian Coastal Shipping Agreement Act 1956, the Stevedoring Industry Act 1956–1966, the Beaches, Fishing Grounds and Sea Routes Protection Act 1932–1966, the Submarine Cables and Pipelines Protection Act 1963–1966, and the Lighthouses Act 1911–1970, the Explosives Act 1961–1966.*

#### **Australian Coastal Shipping Commission**

The Commission was established in 1956 for the purpose of maintaining and operating inter-state, overseas and territorial shipping services. It operates The Australian National Line, a Commonwealth-owned merchant shipping service which at 31 December 1970 comprised thirty-one ships with a total deadweight of 403,374 tons. The total included one large bulk carrier on charter from a foreign owner.

The fleet included two vessels in overseas trading, the 14,082 ton (deadweight) vehicle deck/container ship *Australian Enterprise* and the 26,420 ton (deadweight) cellular container ship *Australian Endeavour*; three vehicle deck/passenger ships, *Empress of Australia* 12,037 tons gross, *Australian Trader* 7,005 tons gross, and *Princess of Tasmania* 3,981 tons gross; four vehicle deck cargo ships totalling 14,919 deadweight tons; one container/ore carrier of 11,900 deadweight tons in the Darwin trade; three bulk carriers in the 50,000 ton (deadweight) class; fifteen other bulk carriers totalling 157,898 deadweight tons; and three conventional general cargo ships totalling 9,405 deadweight tons.

At 31 December 1970 the Commission had on order from an Australian shipyard two vehicle deck steel carriers of 7,500 deadweight tons each.

Overseas, a 26,000 ton (deadweight) cellular container ship was on order from a West German yard for the Australia–East Coast of North America trade. In addition A.N.L. will be part owner and will crew and operate a roll on/roll off vessel of 20,300 deadweight tons in the Australia–West Coast of North America trade. This ship was under construction in Sweden at 31 December 1970.

To service the Line's vehicle deck ships and container/ore carrier, terminals have been established at fifteen ports: Adelaide in South Australia; Melbourne and Geelong in Victoria; Burnie, Devonport, Bell Bay and Hobart in Tasmania; Sydney and Port Kembla in New South Wales; Brisbane, Rockhampton (Port Alma), Mackay, Townsville and Cairns in Queensland; and Darwin in the Northern Territory.

In the year ending 31 December 1970 the vehicular/passenger vessels *Empress of Australia*, *Australian Trader* and *Princess of Tasmania* carried a total of 135,919 passengers and 33,699 passengers' cars between the mainland and Tasmania. Over the same period a total of 6,589,187 tons of cargo was carried by The Australian National Line vessels.

#### **Australian Shipbuilding Board**

Established in March 1941 as a wartime measure under the National Security (Shipbuilding) Regulations and constituted in 1948 under the *Supply and Development Act* 1939–1948, the Board from 1951 has operated under the control of the Minister for Shipping and Transport. In November 1963 it became a division of the Department of Shipping and Transport. The Division's staff numbers 130 including naval architects, engineers, technical, and administrative staff.

The Board consist of a Chairman, and four Members, one of whom is also a Member of the Naval Board. Members are appointed by the Minister for Shipping and Transport.

The functions of the Board are to advise the Minister on matters concerning the shipbuilding industry including the consideration of tenders for ships to be built in Australia, the prices at which vessels may be purchased and sold on behalf of the Commonwealth, and the state and prospects of the industry generally.

To 31 December 1970 the Board had arranged for the construction of 214 vessels valued at approximately \$581 million.

The Board has arranged for the construction of specialised craft such as an oil drilling rig, dredgers of various types, off-shore drilling service vessels, floating cranes, as well as bulk carriers, oil tankers, container ships and roll on/roll off vessels.

Orders held by the Board at 31 December 1970 were valued at \$139 million and numbered twenty-four vessels. These included a large bulk carrier of 78,000 tons deadweight and two tankers of 62,000 tons deadweight and three tankers 22,000 to 24,000 tons deadweight, two 7,600 tons deadweight vehicle deck cargo vessels, four tugs and four dredgers of various types, and eight landing craft.

There are five major Australian shipyards building merchant vessels—two in Queensland, two in South Australia, and one in New South Wales; and two shipyards engaged principally in naval

shipbuilding—one in New South Wales and one in Victoria. There are also numerous small yards, situated in every State, building smaller steel, wooden, aluminium and fibre-glass working and pleasure craft.

*Shipbuilding subsidy.* The Australian shipbuilding industry has been subsidised since 1947, and following the 1963 Tariff Board inquiry into measures of assistance to the Australian shipbuilding industry, the Government decided to extend the shipbuilding subsidy at its existing rate of up to one-third of the cost of construction to include all types of vessels of 200 tons gross and over built in recognised shipyards and intended for use in Australian coastal or inland waterways. This came into effect on 20 May 1964. In respect of vessels of less than 200 tons gross, Australian shipbuilders are afforded protection under the Customs Tariff.

The Tariff Board again inquired into the Australian shipbuilding industry during 1969. The report and recommendations arising from the inquiry have not yet been submitted to the Government.

#### **Australian Stevedoring Industry Authority**

In March 1947 legislation established a permanent Stevedoring Industry Commission to continue in peace-time the functions performed during the war by the Commission established under National Security legislation. In June 1949 legislation was enacted to abolish the Stevedoring Industry Commission, on which employers and employees were represented, and establish in its place a Stevedoring Industry Board of three members, to attend to administrative matters formerly under the control of the Commission, such as the operation of labour bureaux at ports, payment of attendance money and provision of amenities. The industrial functions which previously came within the province of the Commission were assigned to a single Judge of the Commonwealth Court of Conciliation and Arbitration. In August 1956, following a Committee of Inquiry into the stevedoring industry, the Stevedoring Industry Board was replaced by the Australian Stevedoring Industry Authority of three members, including a representative of the management side of industry and a representative of the trade union movement. At the same time the judicial and non-judicial functions formerly exercised by the Commonwealth Court of Conciliation and Arbitration were divided between the Commonwealth Industrial Court and the Commonwealth Conciliation and Arbitration Commission respectively. Awards of the Conciliation and Arbitration Commission subsequently placed payment of sick pay, public holiday pay and annual leave under the administration of the Authority. Under amending legislation, which operated from 6 June 1961, the Authority became responsible for payment of long service leave to registered waterside workers, and its disciplinary powers were strengthened to reduce the time lost through unauthorised stoppages. Further amending legislation which operated from 8 October 1965 made the Authority responsible for the recruitment of waterside workers. In July 1970 by legislative amendment, the management and union positions on the Authority were abolished. The functions of the Authority are now exercised by one full-time Director.

In October 1965 the Government invited the Australian Council of Trade Unions, the Waterside Workers' Federation of Australia, the Association of Employers of Waterside Labour, the Australian Stevedoring Industry Authority, and the Department of Labour and National Service to confer under the Chairmanship of Mr A. E. Woodward, Q.C., with the overall objective of improving the long-term conditions in the stevedoring industry. Following a series of meetings, the Conference, known as the National Stevedoring Industry Conference, published a General Report in April 1967 recording agreement between the parties on a number of matters. These included *inter alia* weekly hire for all registered waterside workers in major ports, together with a pension scheme and provision for reducing the statutory retirement age progressively from seventy to sixty-five years of age. Special arrangements have been agreed to cover any prospective redundancy problems. Following adoption of the Report by all the parties, including the Government, enabling legislation was introduced to allow the changes to be implemented. Permanent employment was commenced in Sydney on 27 November 1967, in Melbourne, Port Kembla, Adelaide, Fremantle and Brisbane on the respective dates, 8 January, 19 February, 4 March, 18 March and 12 August 1968, in Newcastle on 10 March 1969, and Whyalla on 6 July 1970. Other appropriate ports will follow progressively. To enable the permanency arrangements to continue beyond 1 July 1970, the operation of the *Stevedoring Industry (Temporary Provisions) Act 1967–1968* was extended until 1 July 1972.

In July 1970 the National Stevedoring Industry Conference was given statutory backing and redesignated the Stevedoring Industry Council. The Council is constituted along the same lines as the National Stevedoring Industry Conference. Its functions are primarily to advise the Minister for Labour and National Service on the operation of the existing employment arrangements, the development of new employment schemes and such other matters as the Minister might refer to it. It is also required to endeavour to bring about amicable agreement in relation to industrial questions in the industry.

The statutory provisions relating to the industry are now contained in the *Stevedoring Industry (Temporary Provisions) Act 1967–1970* (and Regulations made thereunder), the *Stevedoring Industry Act 1956–1966*, and Division 4 of Part III of the *Conciliation and Arbitration Act 1904–1970*.



**Trade Practices Act 1965-1969 (Part XA—Overseas Cargo Shipping)**

The Overseas Cargo Shipping provisions of the Trade Practices Act are administered by the Minister for Trade and Industry.

The object of the Overseas Cargo Shipping provisions is the control of the operations of shipping conferences (associations into which shipowners have traditionally combined) and of individual shipowners in relation to the carriage of goods by sea from Australia to other countries. To achieve that object the provisions are designed to facilitate negotiations between shipowners and shipper bodies (associations, designated by the Minister, that represent the interests of producers and shippers in Australia of goods exported from Australia).

Regarding shipping conferences, the provisions require certain agreements of a specified character between shipowners operating in the outward trades from Australia to be filed with the Clerk of Shipping Agreements. A shipowner who is a party to such an agreement may be requested, by the Minister, to give to the Minister an undertaking to negotiate with a shipper body with regard to the arrangements for, and the terms and conditions that are applicable to, cargo shipping to which the agreement relates. Whether such a shipowner has failed so to negotiate or whether the services provided pursuant to the agreement are adequate, efficient or economical, are matters that may be referred by the Minister for enquiry and report by the Trade Practices Tribunal. Certain powers are vested in the Governor-General to disapprove the agreement after consideration of a report by the Tribunal to the Minister. A probable effect of such a disapproval would be to force a shipowner party to the agreement to carry on its business in the absence of any agreement with other shipowners. The Governor-General may, however, in his discretion approve such a shipowner entering into another agreement.

Provisions, similar to the provisions in respect of shipping conferences, apply in respect of individual shipowners. In addition, an individual shipowner may, as a result of a declaration by the Governor-General, be prohibited from engaging in certain specified activities in carrying on its business, for example engaging in freight cutting with the object of substantially damaging the business of another shipowner.

Since the Act came into force two shipper bodies have been designated by the Minister—the Australia to Europe Shippers Association and the Singapore/West Malaysia Shippers Association. Shippers are in the process of forming additional bodies in respect of other trades.

The provisions also secure rights for Australian flag operators in respect of the operation of their vessels in the trades from Australia.

## **Collection and presentation of statistics**

### **Basic documents**

From July 1966 shipping statistics have been compiled by the Commonwealth Bureau of Census and Statistics from returns submitted by shipping companies or their representatives to Customs Houses at the various seaports throughout Australia. A return is required for the departure of a vessel from a port as well as for its arrival at that port and shows the following details:

- name of the port at which the return is submitted;
- name of vessel;
- type of shipping service (liner, tramp, bulkship, tanker);
- port registered;
- registered net tonnage;
- last port of call (arrival) or next port of call (departure);
- with cargo or in ballast;
- date of arrival or date of departure;
- ports of loading of cargo (arrival) or ports of discharge of cargo (departure);
- quantity of cargo for each port of loading or discharge.

Prior to July 1966 returns were completed by officers of the Department of Customs and Excise at each port, the major differences then being that the system did not, in the main, rely on information supplied direct by shipping companies or their representatives, and the detail on returns did not include information on type of shipping; service or ports of loading and discharge of cargo.

### **Scope of the statistics**

Arrivals and departures of vessels are treated separately in shipping statistics. Not all vessels are included in the statistics as returns are not required for (i) naval vessels; (ii) yachts and other craft used for pleasure; (iii) foreign fishing vessels that neither load nor discharge cargo; (iv) Australian registered fishing vessels operating from Australian ports; (v) geographical survey vessels, seismic survey vessels, oceanographic survey vessels; (vi) offshore oil drilling rigs and vessels servicing them; (vii) vessels of 200 registered net tons and under.



**Period covered by the statistics**

Monthly shipping statistics relate to vessels arriving at and departing from each port in a calendar month. Annual statistics are published on a financial year basis.

**Statistics of vessels**

Statistics of vessels are compiled in terms of registered net tonnages. Net tonnage is expressed in units of 100 cubic feet (i.e. 100 cu ft equals 1 ton) and represents the volume of enclosed space which can be utilised for cargo or passengers.

**Statistics of vessel movements**

Returns show the last or next port of call of a vessel according to whether an arrival or departure at a port is being reported. Each vessel is classified to either the overseas or the coastal fleets serving Australia. This information, supplemented by the voyage of the vessel indicated by ports it visits to load or discharge cargo, is the basis on which each vessel movement is allocated to one of the following classifications: overseas direct; overseas via other States; interstate direct; interstate via ports in the same State; intrastate via ports in the same State.

**Cargo loaded or discharged**

Returns for arrivals show cargo discharged, and for departures cargo loaded, in terms of units of weight or in terms of units of measurement, depending on the basis on which freight is charged. A ton measurement is a unit of 40 cubic feet. Cargo statistics show separate figures for cargo recorded in tons weight and cargo recorded in tons measurement.

**Type of service**

Overseas shipping cargo statistics are classified by type of service. Coastal shipping cargo statistics, on the other hand, combine all service types.

For overseas shipping, cargo shipped in liners is shown separately from cargo shipped in tramps, bulkships and tankers. A liner is a vessel which, on the voyage on which cargo is loaded or discharged at an Australian port, is operated by a common carrier in providing services on a specified route on a relatively regular basis.

Statistics of cargo shipped in liner services do not necessarily provide a measure of cargo carried by ships operating under shipping conference arrangements. For example, liner services may be provided by shipping companies which are not parties to conference agreements. Cargo may also be shipped under shipping conference conditions in vessels operating on a voyage charter basis for specific cargo, and, in the statistics, such cargo is classified as cargo shipped in tramp vessels.

**Country of loading or discharge of overseas cargo**

In statistics of overseas shipping cargo, country of loading or discharge of cargo is the country of location of the port where the cargo was loaded on to, or is to be discharged from, a reporting vessel. The countries shown are not necessarily the countries of origin or ultimate destination of cargo because previous or subsequent transshipments of cargo are not taken into account. The statistics of cargo classified by the country in which it was loaded or discharged cannot therefore be compared directly with statistics of overseas trade classified by country of origin or consignment.

**Transshipments of cargo within Australia**

The State of loading or discharge shown in the statistics is the State in which cargo is loaded onto, or discharged from, reporting vessels. Cargo loaded in a given State can therefore include cargo previously shipped interstate, while cargo discharged can include cargo which would subsequently be shipped interstate.

**Overseas shipping****Total movement**

The following table shows the number of entrances and clearances (combined) of vessels from and to overseas countries, and the aggregate net tonnage, during each of the years 1965-66 to 1969-70.

**OVERSEAS SHIPPING: ENTRANCES AND CLEARANCES  
(COMBINED) OF VESSELS DIRECT, AUSTRALIA  
1965-66 TO 1969-70**

	1965-66	1966-67(a)	1967-68(a)	1968-69(a)	1969-70(a)
Number of vessels . . . . .	7,958	7,994	7,985	8,750	10,022
Net tonnage . . . . '000 tons	46,382	55,062	60,387	72,578	89,058

(a) Excludes vessels of 200 net tons and under.

Particulars of the total overseas movement of shipping for each year from 1822 to 1920-21 were published in Year Book No. 15, page 507, those for each year from 1921-22 to 1950-51 in Year Book No. 40, page 97, while those for each year from 1941-42 are shown in the Statistical Summary of this Year Book.

#### Total overseas shipping, States, etc.

The following table shows, for each State and the Northern Territory, the number of entrances and clearances of vessels direct from and to overseas countries, and the aggregate net tonnage, during the year 1969-70.

#### OVERSEAS SHIPPING: ENTRANCES AND CLEARANCES OF VESSELS DIRECT, STATES AND NORTHERN TERRITORY, 1969-70(a)

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
Entrances	number	1,537	419	1,045	329	1,392	113	134	4,969
	'000 net tons	13,668	2,388	7,659	3,114	15,902	996	768	44,495
Clearances	number	1,281	552	1,250	322	1,452	83	113	5,053
	'000 net tons	11,171	5,788	8,643	1,767	15,580	946	679	44,573

(a) Excludes vessels of 200 net tons and under.

#### Country of registration of overseas shipping

Particulars of overseas shipping which entered Australian ports during each of the years 1967-68 to 1969-70 are given in the following table according to country of registration of vessels.

#### OVERSEAS SHIPPING: ENTRANCES DIRECT, BY COUNTRY OF REGISTRATION OF VESSELS AUSTRALIA, 1967-68 TO 1969-70(a) (\*000 net tons)

<i>Vessels registered at ports in—</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>Vessels registered at ports in—</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Australia	261	235	490	Panama	756	880	1,134
Denmark	441	669	555	Sweden	669	771	724
France(b)	556	503	788	United Kingdom	7,468	7,899	8,923
Germany, Federal Republic of	447	462	1,068	United States of America	252	250	300
Greece	1,421	1,672	2,493	Other countries	894	1,244	2,441
Hong Kong	187	228	360				
India	353	444	459	All countries—			
Italy	791	681	663	In cargo	18,024	19,592	20,043
Japan	5,130	7,377	9,640	Proportion of total %	59.9	53.8	45.0
Liberia	5,391	7,419	8,570	In ballast	12,085	16,827	24,452
Netherlands	1,067	1,043	1,280	Proportion of total %	40.1	46.2	55.0
New Zealand	305	322	330				
Norway	3,720	4,320	4,277	Grand total	30,109	36,419	44,495

(a) Excludes vessels of 200 net tons and under, and 9 during 1969-70.

(b) Includes New Caledonia, 2 during 1967-68, 3 during 1968-69,

Australian registered tonnage which entered Australian ports from overseas during the year 1969-70 represented 1.01 per cent of the total tonnage entered.

### Interstate shipping

#### Interstate movement

*Interstate direct.* The following table shows the number of entrances and the net tonnage of coastal vessels recorded into each State and the Northern Territory from any other State during 1969-70. The statistics below are not comparable with those for previous years because the method of applying the classification 'interstate direct' has been changed to exclude overseas vessels. Prior to July 1969 overseas vessels were frequently classified as moving 'interstate direct' as distinct from 'overseas via States'. This difference in treatment arose from the practice of classifying movements in terms of port data on individual shipping returns, whereas the current method is to classify primarily on the basis of whether vessels are overseas or coastal.

**INTERSTATE MOVEMENT: ENTRANCES OF COASTAL VESSELS INTERSTATE DIRECT,  
STATES AND NORTHERN TERRITORY, 1969-70(a)**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Number of vessels . . . . .	1,087	1,150	363	655	285	1,183	111	4,834
Net tonnage . . . '000 tons	5,331	3,184	1,259	3,340	1,800	2,539	239	17,693

(a) Excludes vessels of 200 net tons and under.

*Overseas via States.* The figures in the following table show the number and aggregate net tonnage of entrances and clearances of overseas vessels which, having arrived at an Australian port direct from an overseas port, continue their voyages to and from overseas countries via other Australian States. The statistics in the following table are not comparable with those for previous years because of the change in method of classifying some overseas vessel movements referred to under *Interstate direct*, see previous page.

**INTERSTATE MOVEMENT: ENTRANCES AND CLEARANCES OF VESSELS OVERSEAS VIA  
OTHER AUSTRALIAN STATES AND NORTHERN TERRITORY, 1969-70(a)**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances . . . number	1,591	1,795	893	722	496	462	50	6,009
'000 net tons	9,174	12,809	4,208	4,285	3,404	2,035	124	36,039
Clearances . . . number	1,880	1,653	696	744	418	491	69	5,951
'000 net tons	11,856	9,369	3,256	5,920	3,264	2,053	217	35,935

(a) Excludes vessels of 200 net tons and under.

*Total interstate movement.* The following table shows, for each State and the Northern Territory, the total number of entrances and clearances of vessels from and for other States during the year 1969-70 together with the aggregate net tonnage.

**INTERSTATE MOVEMENT: TOTAL ENTRANCES AND CLEARANCES  
STATES AND NORTHERN TERRITORY, 1969-70(a)**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances . . . number	2,678	2,945	1,256	1,377	781	1,645	161	10,843
'000 net tons	14,505	15,993	5,467	7,625	5,204	4,574	363	53,732
Clearances . . . number	2,965	2,801	1,058	1,384	713	1,683	177	10,781
'000 net tons	17,073	12,540	4,509	8,931	5,415	4,604	450	53,523

(a) Excludes vessels of 200 net tons and under.

The following table shows the total interstate movement of shipping, including overseas vessels travelling overseas via States, for Australia for each of the years 1965-66 to 1969-70.

**INTERSTATE MOVEMENT: TOTAL ENTRANCES AND CLEARANCES  
AUSTRALIA, 1965-66 TO 1969-70**

	1965-66	1966-67(a)	1967-68(a)	1968-69(a)	1969-70(a)
Entrances . . . number	11,113	10,536	10,595	10,830	10,843
'000 net tons	43,644	43,272	44,588	47,005	53,732
Clearances . . . number	11,097	10,542	10,566	10,824	10,781
'000 net tons	43,609	43,398	44,529	47,070	53,523

(a) Excludes vessels of 200 net tons and under.

**Australian trading vessels**

The following table shows particulars of all Australian trading vessels of 200 gross tons or more engaged in the regular overseas, interstate or intrastate services at 31 December 1970.



**AUSTRALIAN TRADING VESSELS OF 200 GROSS TONS OR MORE**  
**31 DECEMBER 1970**

(Source: Department of Shipping and Transport)

<i>Vessels</i>	<i>Number</i>	<i>Dead-weight tons</i>	<i>Gross tons</i>
Interstate vessels—			
Australian-owned, Australian-registered . . . .	85	908,967	673,225
Overseas-owned, Australian-registered, engaged in Australian coastal trade—			
New Zealand-owned. . . . .	6	17,247	15,410
Other . . . . .	9	264,987	167,593
Overseas-owned, overseas registered, on charter, engaged in Australian coastal trade . . . .	6	163,166	100,584
Total interstate vessels . . . . .	106	1,354,367	956,812
Intrastate vessels(a) . . . . .	23	126,042	84,474
Total coastal trading vessels . . . . .	129	1,480,409	1,041,286
Overseas trading vessels—			
Australian-owned, Australian-registered operated mainly on overseas services . . . . .	8	66,370	67,244
Australian-owned, overseas-registered operated wholly on overseas services . . . . .	6	55,063	40,907
Total overseas trading vessels . . . . .	14	121,433	108,151
Total Australian trading vessels . . . . .	143	1,601,842	1,149,437

(a) Includes two vessels registered overseas of 46,133 deadweight tons and 30,545 gross tons.

### Shipping at principal ports

For details of Harbour Boards and Trusts in each State *see* the chapter Local Government.

The following table shows the total volume of shipping—overseas, interstate and coastal—which entered the principal ports of Australia during the years 1968–69 and 1969–70.

**TOTAL SHIPPING: ENTRANCES AT PRINCIPAL PORTS, AUSTRALIA**  
**1968–69 AND 1969–70(a)**

<i>Port of entry</i>	<i>1968–69</i>		<i>1969–70</i>		<i>Port of entry</i>	<i>1968–69</i>		<i>1969–70</i>	
	<i>Number</i>	<i>Net tons</i>	<i>Number</i>	<i>Net tons</i>		<i>Number</i>	<i>Net tons</i>	<i>Number</i>	<i>Net tons</i>
		'000		'000			'000		'000
New South Wales—					Western Australia—				
Sydney(b) . . . .	4,412	19,267	4,289	21,422	Fremantle(d) . . . .	1,389	8,920	1,414	10,112
Newcastle . . . .	1,768	7,456	1,514	8,005	Albany . . . . .	159	891	161	905
Port Kembla . . . .	1,081	5,530	1,001	5,787	Bunbury . . . . .	154	806	145	779
Victoria—					Carnarvon . . . . .	13	22	15	37
Melbourne . . . .	2,927	12,585	2,854	13,714	Geraldton . . . . .	123	686	104	702
Geelong . . . . .	465	3,790	517	4,588	Yampi . . . . .	156	1,274	160	1,211
Queensland—					Port Hedland . . . .	309	2,107	499	5,045
Brisbane . . . . .	1,595	7,159	1,621	7,684	Dampier . . . . .	271	3,727	373	5,032
Bowen . . . . .	33	143	33	139	Tasmania—				
Cairns . . . . .	206	587	187	473	Hobart . . . . .	566	1,598	643	1,763
Gladstone . . . .	307	3,517	370	4,327	Burnie . . . . .	550	1,353	452	1,562
Mackay . . . . .	156	653	149	605	Devonport . . . . .	471	870	450	988
Rockhampton . . . .	111	452	135	555	Launceston . . . . .	416	1,323	461	1,440
Townsville . . . .	330	1,316	372	1,461	Port Latta . . . . .	28	481	41	833
Weipa . . . . .	186	1,867	226	2,333	Northern Territory—				
South Australia—					Darwin . . . . .	174	757	186	815
Adelaide(c) . . . .	1,520	7,448	1,473	7,180	Groote Island . . . .	56	239	92	298
Port Lincoln . . . .	276	712	294	867					
Port Pirie . . . . .	212	908	238	1,008					
Rapid Bay . . . . .	36	131	41	142					
Wallaroo . . . . .	29	160	42	276					
Whyalla . . . . .	377	2,517	357	3,159					

(a) Excludes vessels of 200 net tons and under.

(b) Includes Botany Bay.

(c) Includes Port Stanvac.

(d) Includes Kwinana.

The following table shows the total shipping tonnage which entered selected ports of Australia, New Zealand and the United Kingdom during 1969-70.

**TOTAL SHIPPING: ENTRANCES AT PORTS, AUSTRALIA, NEW ZEALAND AND THE UNITED KINGDOM, 1969-70**

('000 net tons)

Port	Net tonnage entered	Port	Net tonnage entered	Port	Net tonnage entered
<b>AUSTRALIA—</b>		<b>NEW ZEALAND—</b>		<b>ENGLAND AND WALES—continued</b>	
Sydney (N.S.W.)(a) . . .	21,422	Wellington . . .	5,027	Dover . . .	13,135
Melbourne (Vic.) . . .	13,714	Auckland . . .	4,994	Manchester (including	
Fremantle (W.A.)(b) . . .	10,112	Lyttleton . . .	3,007	Ellesmere Port and	
Newcastle (N.S.W.) . . .	8,005	Whangarei . . .	2,528	Runcorn) . . .	5,341
Adelaide (S.A.)(c) . . .	7,180	Otago . . .	1,128	Tyne Ports . . .	5,370
Brisbane (Qld) . . .	7,684	Napier . . .	1,449	Hull (including Keadby) . . .	6,258
Port Kembla (N.S.W.) . . .	5,787	Bluff . . .	1,017	Middlesbrough . . .	8,671
Geelong (Vic.) . . .	4,588	Taranaki . . .	847	Bristol . . .	4,752
Dampier (W.A.) . . .	5,032	Tauranga . . .	1,654	Swansea . . .	4,507
Gladstone (Qld) . . .	4,327			Cardiff . . .	2,874
Whyalla (S.A.) . . .	3,159	<b>ENGLAND AND WALES—</b>		<b>SCOTLAND—</b>	
Port Hedland (W.A.) . . .	5,045	London . . .	44,081	Glasgow . . .	5,388
Weipa (Qld) . . .	2,333	Southampton . . .	25,286		
Hobart (Tas.) . . .	1,763	Liverpool and		<b>NORTHERN IRELAND—</b>	
Burnie (Tas.) . . .	1,562	Birkenhead . . .	21,946	Belfast . . .	9,718

(a) Includes Botany Bay. . . (b) Includes Kwinana. . . (c) Includes Port Stanvac.

## Shipping cargo

### Overseas and interstate cargo

The table on page 334 shows the aggregate tonnage of overseas and interstate cargo discharged and shipped at Australian ports.

**CARGO DISCHARGED AND SHIPPED: AUSTRALIA, 1965-66 TO 1969-70**

('000 tons)

Year	Overseas cargo				Interstate cargo			
	Discharged		Shipped		Discharged		Shipped	
	Weight	Meas.	Weight	Meas.	Weight	Meas.	Weight	Meas.
1965-66 . . .	24,156	4,119	21,749	2,043	15,349	1,942	16,172	1,484
1966-67 . . .	27,109	4,152	32,691	1,943	15,565	1,900	15,692	1,728
1967-68 . . .	27,572	4,684	41,339	2,102	16,980	2,079	17,207	1,876
1968-69 . . .	29,298	5,212	54,956	2,054	18,158	2,161	18,511	1,932
1969-70 . . .	28,201	5,159	76,849	2,127	20,308	2,248	20,478	2,030

## CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1969-70

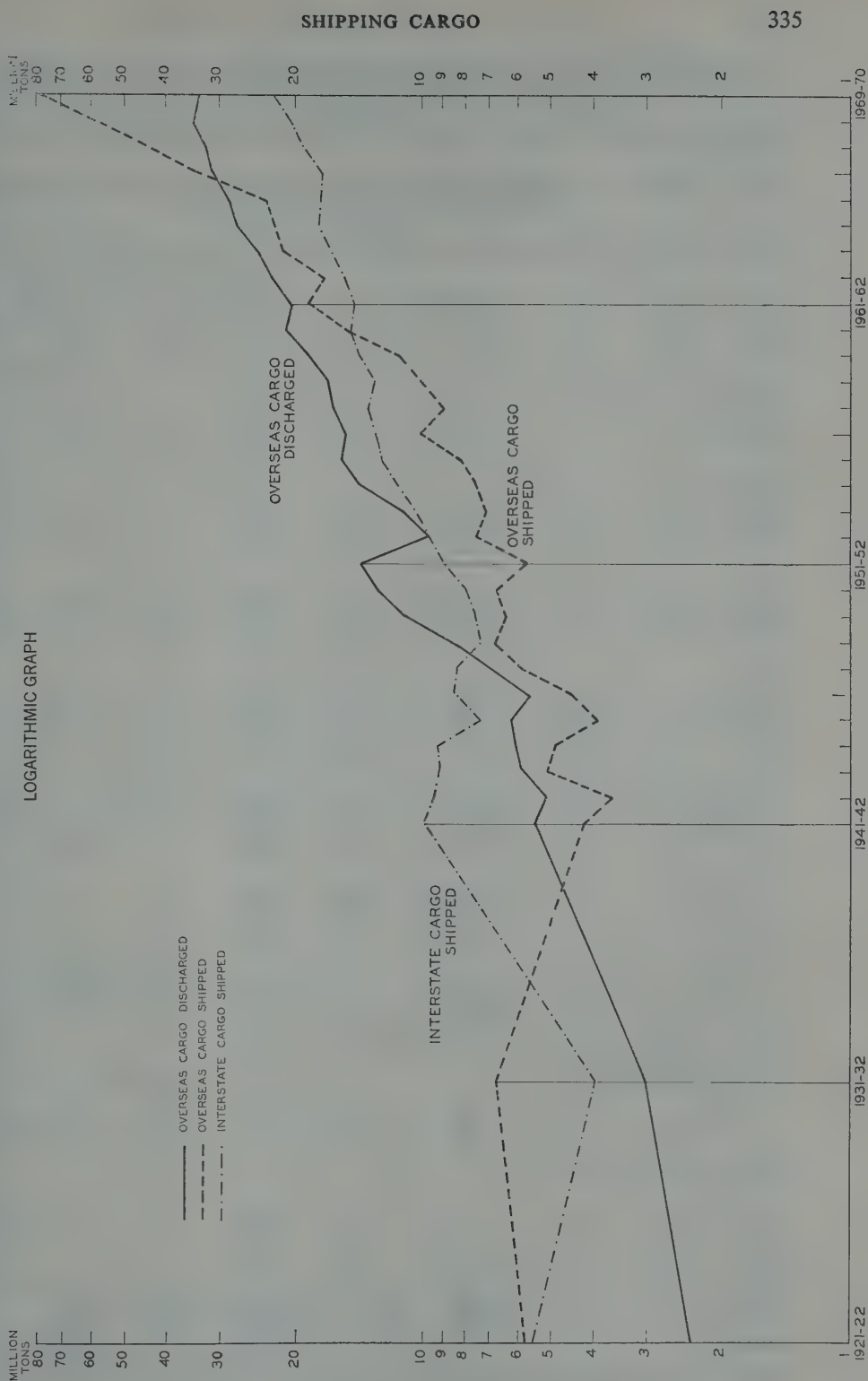
('000 tons)

Port	Overseas cargo				Interstate cargo				Total
	Discharged		Shipped		Discharged		Shipped		
	Weight	Meas.	Weight	Meas.	Weight	Meas.	Weight	Meas.	
<b>New South Wales—</b>									
Sydney . . . . .	3,634	2,108	5,247	637	1,398	76	568	154	
Botany Bay . . . . .	3,838	..	50	..	673	..	226	..	
Newcastle . . . . .	1,043	18	7,834	..	3,759	..	1,383	8	
Port Kembla . . . . .	461	..	3,871	6	5,243	..	1,662	..	
Other . . . . .	..	..	12	..	7	..	1	..	
<b>Total, New South Wales</b>	<b>8,977</b>	<b>2,126</b>	<b>17,015</b>	<b>644</b>	<b>11,080</b>	<b>76</b>	<b>3,841</b>	<b>161</b>	
<b>Victoria—</b>									
Melbourne . . . . .	3,514	2,075	1,379	811	1,516	910	655	1,019	
Geelong . . . . .	3,812	11	1,758	23	1,096	..	560	..	
Portland . . . . .	162	..	230	5	100	..	3	..	
Westernport . . . . .	902	..	36	..	75	19	920	2	
Other . . . . .	..	..	..	..	..	..	..	..	
<b>Total, Victoria</b>	<b>8,390</b>	<b>2,086</b>	<b>3,402</b>	<b>839</b>	<b>2,788</b>	<b>929</b>	<b>2,138</b>	<b>1,020</b>	
<b>Queensland—</b>									
Brisbane . . . . .	2,706	304	1,172	168	698	9	153	12	
Cairns . . . . .	31	..	280	1	22	3	3	3	
Gladstone . . . . .	220	..	6,672	..	78	..	122	..	
Mackay . . . . .	11	1	444	..	19	2	125	..	
Townsville . . . . .	31	14	781	..	99	3	118	..	
Other . . . . .	72	1	3,767	1	4	6	662	1	
<b>Total, Queensland</b>	<b>3,071</b>	<b>320</b>	<b>13,116</b>	<b>170</b>	<b>921</b>	<b>24</b>	<b>1,183</b>	<b>16</b>	
<b>South Australia—</b>									
Port Adelaide . . . . .	522	271	830	154	789	26	260	7	
Ardrossan . . . . .	..	..	163	..	..	..	309	..	
Port Lincoln . . . . .	90	..	495	5	35	..	455	..	
Port Pirie . . . . .	..	..	738	4	239	..	275	..	
Port Stanvac . . . . .	1,742	..	15	..	241	..	312	..	
Rapid Bay . . . . .	..	..	..	..	5	..	93	..	
Whyalla . . . . .	151	..	1,701	..	1,126	..	5,075	..	
Other . . . . .	64	..	640	2	6	..	416	..	
<b>Total, South Australia</b>	<b>2,569</b>	<b>271</b>	<b>4,582</b>	<b>165</b>	<b>2,440</b>	<b>26</b>	<b>7,196</b>	<b>7</b>	
<b>Western Australia—</b>									
Fremantle . . . . .	844	284	2,467	178	1,067	17	886	18	
Albany . . . . .	173	..	243	1	20	..	..	..	
Bunbury . . . . .	139	..	672	33	3	..	56	..	
Dampier . . . . .	146	6	14,113	..	..	..	91	..	
Geraldton . . . . .	100	..	1,087	..	11	..	..	..	
Kwinana . . . . .	2,958	..	99	..	91	..	569	..	
Port Hedland . . . . .	84	9	14,441	..	9	2	292	1	
Yampi . . . . .	1	..	581	..	23	..	1,827	..	
Other . . . . .	137	3	998	5	39	..	1,367	1	
<b>Total, Western Australia</b>	<b>4,582</b>	<b>301</b>	<b>34,701</b>	<b>217</b>	<b>1,262</b>	<b>20</b>	<b>5,088</b>	<b>20</b>	
<b>Tasmania—</b>									
Hobart . . . . .	148	14	267	40	609	206	426	127	
Burnie . . . . .	87	3	114	17	213	254	123	130	
Launceston . . . . .	52	9	58	23	616	196	158	136	
Port Latta . . . . .	5	..	2,085	..	32	..	..	..	
Other . . . . .	30	20	21	13	186	439	214	409	
<b>Total, Tasmania</b>	<b>322</b>	<b>45</b>	<b>2,545</b>	<b>92</b>	<b>1,656</b>	<b>1,095</b>	<b>920</b>	<b>801</b>	
<b>Northern Territory—</b>									
Darwin . . . . .	260	9	979	..	117	34	1	2	
Groote Island . . . . .	7	..	509	..	16	13	112	..	
Gove . . . . .	23	1	..	..	29	31	..	1	
Other . . . . .	..	..	..	..	..	..	..	..	
<b>Total, Northern Territory</b>	<b>290</b>	<b>10</b>	<b>1,488</b>	<b>..</b>	<b>162</b>	<b>78</b>	<b>113</b>	<b>3</b>	
<b>Australia</b>	<b>28,201</b>	<b>5,159</b>	<b>76,849</b>	<b>2,127</b>	<b>20,308</b>	<b>2,248</b>	<b>20,478</b>	<b>2,030</b>	



# OVERSEAS AND INTERSTATE SHIPPING CARGO: AUSTRALIA

1921-22 TO 1969-70



**Overseas cargo according to major trade areas and type of service**

The tables on pages 336-7 show for the years 1967-68 to 1969-70 particulars of cargo loaded in Australia for discharge overseas, and cargo discharged in Australia from overseas, classified according to the major trade areas of the world, by type of shipping service (i.e. liner or tramp, bulkship and tanker).

**CARGO LOADED IN AUSTRALIA FOR DISCHARGE OVERSEAS: MAJOR TRADE AREAS BY TYPE OF SERVICE: 1967-68 TO 1969-70**

('000 tons)

<i>Major trade areas</i>	<i>Liners (a)</i>		<i>Tramps, bulk ships, tankers</i>		<i>All vessels</i>	
	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>
<b>North America and Hawaii—</b>						
1967-68 . . . .	555	120	1,888	..	2,443	120
1968-69 . . . .	582	112	2,452	..	3,034	112
1969-70 . . . .	649	123	3,240	1	3,890	124
<b>South America—</b>						
1967-68 . . . .	65	8	314	..	379	8
1968-69 . . . .	25	5	300	2	325	7
1969-70 . . . .	50	6	427	..	477	6
<b>Europe—</b>						
1967-68 . . . .	1,120	657	4,508	70	5,628	727
1968-69 . . . .	1,148	515	6,672	133	7,820	648
1969-70 . . . .	1,363	509	9,100	11	10,462	520
<b>Africa—</b>						
1967-68 . . . .	144	61	247	3	391	64
1968-69 . . . .	150	85	237	..	387	85
1969-70 . . . .	238	99	370	15	608	114
<b>Asia—</b>						
<b>Eastern Asia—</b>						
1967-68 . . . .	(b)	(b)	26,527	2	(b)	(b)
1968-69 . . . .	1,134	151	38,290	4	39,424	155
1969-70 . . . .	1,490	193	54,960	..	56,450	193
<b>Other Asia—</b>						
1967-68 . . . .	(b)	(b)	2,234	118	(b)	(b)
1968-69 . . . .	872	343	1,622	130	2,494	473
1969-70 . . . .	919	378	2,291	62	3,210	439
<b>Total Asia—</b>						
1967-68 . . . .	2,042	433	28,761	120	30,803	553
1968-69 . . . .	2,006	494	39,912	134	41,918	628
1969-70 . . . .	2,409	570	57,251	62	59,660	632
<b>Papua and New Guinea, New Zealand and Pacific Islands—</b>						
1967-68 . . . .	582	609	1,086	6	1,668	615
1968-69 . . . .	596	551	855	17	1,451	568
1969-70 . . . .	708	666	1,017	59	1,725	724
<b>Indian Ocean Is. and Antarctic Area—</b>						
1967-68 . . . .	..	..	26	13	26	13
1968-69 . . . .	..	..	20	5	20	5
1969-70 . . . .	..	..	26	6	26	7
<b>Australia—</b>						
1967-68 . . . .	4,508	1,889	36,831	213	41,339	2,102
1968-69 . . . .	4,508	1,763	50,448	291	54,956	2,054
1969-70 . . . .	5,417	1,973	71,432	154	76,849	2,127

(a) Cargo and passenger liners.

(b) Separate details not available.

**CARGO DISCHARGED IN AUSTRALIA FROM OVERSEAS: MAJOR TRADE AREAS  
BY TYPE OF SERVICE: 1967-68 TO 1969-70**

('000 tons)

<i>Major trade areas</i>	<i>Liners(a)</i>		<i>Tramps, bulk-ships, tankers</i>		<i>All vessels</i>	
	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>
<b>North America and Hawaii—</b>						
1967-68 . . . . .	341	657	1,856	371	2,196	1,028
1968-69 . . . . .	391	616	1,715	474	2,106	1,090
1969-70 . . . . .	406	619	1,361	376	1,768	994
<b>South America—</b>						
1967-68 . . . . .	28	3	14	3	42	6
1968-69 . . . . .	11	1	23	1	34	2
1969-70 . . . . .	13	3	19	..	32	3
<b>Europe—</b>						
1967-68 . . . . .	651	1,516	137	129	788	1,644
1968-69 . . . . .	676	1,620	263	233	940	1,853
1969-70 . . . . .	623	1,811	150	195	774	2,007
<b>Africa—</b>						
1967-68 . . . . .	93	55	200	7	293	62
1968-69 . . . . .	121	60	62	..	183	60
1969-70 . . . . .	120	56	106	..	226	56
<b>Asia—</b>						
<b>Eastern Asia—</b>						
1967-68 . . . . .	(b)	(b)	665	209	(b)	(b)
1968-69 . . . . .	316	1,023	976	343	1,292	1,366
1969-70 . . . . .	374	1,050	995	227	1,369	1,277
<b>Other Asia—</b>						
1967-68 . . . . .	(b)	(b)	20,130	67	(b)	(b)
1968-69 . . . . .	137	397	21,473	90	21,610	487
1969-70 . . . . .	155	431	20,956	57	21,110	488
<b>Total Asia—</b>						
1967-68 . . . . .	396	1,337	20,795	276	21,190	1,612
1968-69 . . . . .	453	1,420	22,449	433	22,902	1,853
1969-70 . . . . .	528	1,481	21,951	285	22,479	1,765
<b>Papua and New Guinea, New Zealand and Pacific Islands—</b>						
1967-68 . . . . .	227	325	1,887	4	2,115	330
1968-69 . . . . .	277	346	2,007	6	2,283	352
1969-70 . . . . .	318	323	1,813	9	2,131	332
<b>Indian Ocean Is. and Antarctic Area—</b>						
1967-68 . . . . .	..	..	947	2	947	2
1968-69 . . . . .	..	..	851	2	851	2
1969-70 . . . . .	..	..	791	2	791	2
<b>Australia—</b>						
1967-68 . . . . .	1,736	3,892	25,836	792	27,572	4,684
1968-69 . . . . .	1,929	4,064	27,369	1,148	29,298	5,212
1969-70 . . . . .	2,008	4,293	26,193	866	28,201	5,159

(a) Cargo and passenger liners. (b) Separate details not available.

**Overseas cargo according to country of registration of vessels**

The following table shows the total overseas cargo, discharged and shipped combined, according to the country in which the vessels were registered, during each of the years 1967-68 to 1969-70.



**OVERSEAS CARGO DISCHARGED AND SHIPPED, BY COUNTRY OF REGISTRATION OF VESSELS: AUSTRALIA, 1967-68 TO 1969-70**

('000 tons)

<i>Vessels registered at ports in—</i>	<i>1967-68</i>		<i>1968-69</i>		<i>1969-70</i>	
	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>	<i>Weight</i>	<i>Meas.</i>
Australia . . . . .	475	154	532	129	823	206
Denmark . . . . .	946	125	1,672	93	1,340	84
France and New Caledonia . . . . .	1,012	91	864	114	1,514	109
Germany, Federal Republic of . . . . .	914	339	771	375	2,147	413
Greece . . . . .	3,006	113	3,496	182	5,799	180
Hong Kong . . . . .	378	93	438	114	716	106
India . . . . .	757	53	926	58	1,175	71
Italy . . . . .	577	63	550	49	643	61
Japan . . . . .	15,000	630	22,429	703	30,071	697
Liberia . . . . .	13,921	128	18,803	239	21,622	199
Netherlands . . . . .	2,226	407	2,086	409	2,488	375
New Zealand . . . . .	527	463	577	424	662	468
Norway . . . . .	10,376	458	11,317	595	11,069	442
Panama . . . . .	1,690	17	2,005	33	2,406	43
Sweden . . . . .	1,453	581	1,622	537	1,592	495
United Kingdom . . . . .	13,379	2,719	13,480	2,802	15,248	2,797
United States of America . . . . .	231	162	231	139	333	171
Other . . . . .	2,043	190	2,455	271	5,402	370
<b>Grand total . . . . .</b>	<b>68,911</b>	<b>6,786</b>	<b>84,254</b>	<b>7,266</b>	<b>105,050</b>	<b>7,285</b>

### World shipping tonnage

At 1 July 1970 the total number of steamships and motorships 100 gross tons and upwards throughout the world was 52,444 with a gross tonnage of 227,489,864. Of those totals, steamships numbered 9,959 for 82,064,527 gross tons, and motorships 44,485 for 145,425,337. This includes 6,103 oil tankers of 100 gross tons and upwards with a gross tonnage of 88,139,853. Australian steamships and motorships, 344 for 1,074,112 gross tons constituted 0.66 per cent and 0.47 per cent respectively of the total number and gross tonnage. This information has been derived from *Lloyd's Register of Shipping*.

### Vessels registered in Australia

The following table shows the number and gross tonnage of trading vessels of 200 tons and over registered in Australia at 31 December 1970, classified according to: (i) year of construction, (ii) type of trade in which the vessels were engaged, and (iii) vessels built in Australian or in overseas shipyards.

#### AUSTRALIAN-REGISTERED TRADING VESSELS, 31 DECEMBER 1970(a)

(Source: Department of Shipping and Transport)

<i>Year of construction</i>	<i>Overseas and interstate vessels</i>		<i>Intrastate vessels</i>		<i>Built in Australian yards</i>		<i>Built overseas</i>		<i>Total</i>	
	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>	<i>No.</i>	<i>Gross tons</i>
1966 and earlier . . . . .	90	619,722	15	19,972	61	410,668	44	229,026	105	639,694
1967 . . . . .	2	47,021	1	204	3	47,225	..	..	3	47,225
1968 . . . . .	4	99,326	2	669	5	63,907	1	36,088	6	99,995
1969 . . . . .	7	88,005	3	33,014	8	79,295	2	41,724	10	121,019
1970 . . . . .	5	69,398	..	..	4	52,814	1	16,584	5	69,398
<b>Total registered in Australia . . . . .</b>	<b>108</b>	<b>923,472</b>	<b>21</b>	<b>53,859</b>	<b>81</b>	<b>653,909</b>	<b>48</b>	<b>323,422</b>	<b>129</b>	<b>977,331</b>

(a) 200 gross tons and over.

## Miscellaneous

### Shipping freight rates

Lists of shipping freight rates for selected commodities are shown annually in the bulletin *Transport and Communication* and quarterly, in less detail, in the *Quarterly Summary of Australian Statistics*.

### Shipping casualties

Courts of Marine Inquiry are constituted by a magistrate assisted by skilled assessors, and, when necessary, are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault. Particulars of shipping losses and casualties reported on or near the coast during each of the years 1965-66 to 1969-70 are shown in the table below.

### SHIPPING CASUALTIES TO OVERSEAS AND INTERSTATE STEAM AND MOTOR VESSELS(a) AUSTRALIA, 1965-66 TO 1969-70

Year	Shipping losses			Other shipping Casualties			Total shipping casualties		
	Vessels	Net tons	Lives lost	Vessels	Net tons	Lives lost	Vessels	Net tons	Lives lost
1965-66	1	287	13	87	375,161	..	88	375,448	13
1966-67	..	..	..	104	545,927	..	104	545,927	..
1967-68	..	..	..	100	416,332	..	100	416,332	..
1968-69	..	..	..	105	434,028	..	105	434,028	..
1969-70	1	734	21	83	318,024	..	84	318,758	21

(a) Vessels over 50 net tons.

### Lighthouses; distances by sea; depth of water and tides at main ports

A list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power and visibility of each light will be found in *Transport and Communication*, Bulletin No. 60.

The distances by sea between principal ports of Australia and some important ports in other countries which trade with Australia and the depths of water and tides at principal ports of Australia will be found in *Transport and Communication*, Bulletin No. 60.

## RAILWAYS

### Government railways

Government railways in Australia operate in all States and Territories and provide an important means of transportation. In 1969-70 a total of 82.4 million tons of freight were carried, an increase of 103.0 per cent over the 40.6 million tons carried in 1949-50. However, in the same twenty-year period the number of passengers carried (mostly within the suburban areas of Sydney and Melbourne) declined by 10.3 per cent from 505 millions in 1949-50 to 450 millions in 1969-70. The number of train miles run during 1969-70 (97.1 million) was only 4.0 per cent greater than in 1949-50, which is an indication of the trend towards heavier train loads with the more powerful motive power now available. Since the introduction of the first mainline diesel-electric locomotives in 1950 their numbers have increased greatly until at 30 June 1970 there were 1,273 throughout Australia. Diesel-electric locomotives during 1969-70 hauled 60 million train-miles, while steam locomotives hauled only 3 million train-miles.

### Railway development

The first steam-operated railway in Australia ran between Melbourne and Port Melbourne, a distance of two miles, and was opened on 12 September 1854. It was owned and operated by the Melbourne and Hobson's Bay Railway. Within a short time privately-owned railways opened in other States, but owing to the small volume of traffic available they were soon in financial difficulties and all were taken over by the respective State Governments. Under the policy of Government ownership and control the railway networks expanded until at 30 June 1941 there were 27,234 route-miles open for traffic in Australia. This was the greatest mileage ever recorded. Since the 1939-45

War many uneconomic branch lines have been closed. From 1 July 1948 to 30 June 1970, 3,326 miles have been closed, the greatest lengths being in Western Australia (997 miles), Queensland (853 miles), and Victoria (621 miles). During this same period 1,166 miles of new railway were added to the networks. The following table sets out the route-miles of government railways in each State and Territory at various dates since 1855.

**GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN, STATES AND TERRITORIES  
1855 TO 1970  
(Miles)**

30 June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1855(a)	14	2	..	7	..	..	..	..	23
1861(a)	73	114	..	56	..	..	..	..	243
1871(a)	358	276	218	133	..	45	..	..	1,030
1881(a)	996	1,247	800	832	92	45	..	..	4,012
1891	2,182	2,763	2,195	1,666	198	351	145	..	9,500
1901	2,846	3,237	2,801	1,736	1,355	457	145	..	12,577
1911	3,762	3,523	3,868	1,935	2,376	470	145	..	16,079
1921	5,043	4,267	5,752	3,408	3,992	630	199	5	23,296
1931	6,247	4,514	6,529	3,725	4,634	665	317	5	26,636
1941	6,368	4,518	6,567	3,809	4,835	642	490	5	27,234
1951	6,354	4,445	6,560	3,805	4,682	613	490	5	26,954
1961	6,303	4,050	6,324	3,836	4,577	517	490	5	26,102
1966	6,259	3,984	5,785	3,781	4,201	500	490	5	25,005
1967	6,259	4,027	5,730	3,779	4,269	500	490	5	25,059
1968	6,265	4,012	5,825	3,780	4,269	500	490	5	25,146
1969	6,265	3,972	5,824	3,759	4,280	500	490	5	25,095
1970	6,265	3,962	5,813	3,743	4,282	500	490	5	25,060

(a) At 31 December.

One feature of the Australian government railways is the variety of gauges to which they are built. There are three principal gauges, 'broad' (5ft 3in), 'standard' (4ft 8½in), and 'narrow' (3ft 6in). Extensive route-mileages of 3ft 6in gauge railway were built in areas where traffic volumes were initially known to be small and where it was imperative to minimise the costs of construction. The following table shows the mileages open in each State and Territory at 30 June 1970 according to gauge.

**GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN, BY GAUGE  
STATES AND TERRITORIES, 30 JUNE 1970  
(Miles)**

Gauge	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
5ft 3 in	(a)204	(b)3,751	..	1,601	..	..	..	..	5,556
4ft 8½ in	(c)6,090	202	69	(d)1,088	(e)905	..	..	(f)5	8,359
3ft 6 in	..	..	5,714	(g)1,025	(h)3,377	500	(i)490	..	11,106
2ft 6in	..	9	..	..	..	..	..	..	9
2ft 0in	..	..	30	..	..	..	..	..	30
<b>Total</b>	<b>6,294</b>	<b>3,962</b>	<b>5,813</b>	<b>3,714</b>	<b>4,282</b>	<b>500</b>	<b>490</b>	<b>5</b>	<b>25,060</b>
Per 1,000 of population	1.37	1.15	3.23	3.21	4.37	1.27	6.86	0.04	2.00
Per 1,000 square miles	20.25	45.08	8.72	9.85	4.39	18.95	0.94	5.32	8.44

(a) Portion of Victorian Railway system. (b) Excludes 202 route-miles of 5ft 3in gauge which almost parallels the 4ft 8½in gauge line between Melbourne and the Murray River. (c) Includes 29 route-miles of 4ft 8½in gauge line from Broken Hill to Cockburn owned and operated by the South Australian Government Railways. (d) Comprises 654 miles of the Trans-Australian and 217 miles of the Central Australia Railway systems and 217 miles from Port Pirie to Cockburn. (e) Includes 454 miles of the Trans-Australian Railway system. (f) Australian Capital Territory Railway system. (g) Includes 428 miles of the Central Australia Railway system. (h) Excludes 248 miles of 3ft 6in gauge line which parallels the 4ft 8½in gauge line and 74 miles of 3ft 6in/4ft 8½in dual gauge line which are included in the 4ft 8½in gauge line. (i) Comprises 173 miles of the Central Australia and 317 miles of the North Australia Railway systems.



**Government railway systems**

There are six separate State Government railway systems and one Commonwealth railway system. As the Commonwealth system includes mileages in South Australia and Western Australia, and the Victorian system extends into New South Wales, the system route-mileages shown in the following table do not represent mileages within each State and Territory. These are shown in the previous table. The route-mileage of each system open for traffic, according to gauge, at 30 June 1970 is shown in the following table.

**GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN, BY GAUGE AND SYSTEM**  
**30 JUNE 1970**  
(Miles)

System	Gauge					Total
	5ft 3in	4ft 8½in	3ft 6in	2ft 6in	2ft 0in	
New South Wales	..	(a)6,061	..	..	..	6,061
Victoria	(b)3,955	202	..	9	..	4,166
Queensland	..	69	5,714	..	30	5,813
South Australia	1,601	246	597	..	..	2,444
Western Australia	..	451	(c)3,377	..	..	3,828
Tasmania	..	..	500	..	..	500
Commonwealth	..	1,330	918	..	..	2,248
<b>Australia</b>	<b>5,556</b>	<b>8,359</b>	<b>11,106</b>	<b>9</b>	<b>30</b>	<b>25,060</b>

(a) Includes 270 route-miles which are electrified. (b) Excludes 202 route-miles of 5ft 3in gauge line which almost parallels the 4ft 8½in gauge line between Melbourne and the Murray River. Includes 262 route-miles which are electrified. (c) Excludes 248 miles of 3ft 6in gauge line which parallels the 4ft 8½in gauge line and 74 miles of 3ft 6in/4ft 8½in dual gauge line which are included in the 4ft 8½in gauge line.

The New South Wales system is based on Sydney and extends throughout the State. The Victorian system based on Melbourne radiates throughout the State, extending into areas of southern New South Wales. The Queensland system extends along the coast from Brisbane to Cairns in the north, while branch lines extend inland from Brisbane and the larger coastal cities of Rockhampton and Townsville. The main South Australian system is in the south-east of the State, but an isolated narrow-gauge system operates in the Eyre Peninsula area. The railway system in Western Australia is established in the south-western section of the State, but extends north to Meekatharra and east to Kalgoorlie and Esperance. In Tasmania the main line connects Hobart and Launceston, and there are branch lines along the northern coast.

The Commonwealth Railways comprises four separate railways. The Trans-Australian Railway, extending from Port Pirie to Kalgoorlie, is of 4ft 8½in gauge, as is that part of the Central Australia Railway from Port Augusta (Sterling North) to Marree. A further extension of this railway from Marree to Alice Springs is of 3ft 6in gauge, as is the North Australia Railway from Darwin to Birdum. The Australian Capital Territory Railway from Queanbeyan to Canberra is of 4ft 8½in gauge. In this chapter particulars of the four Commonwealth railways are combined; however, particulars for each railway are shown separately in the annual bulletin *Transport and Communication*.

A graph showing the route-mileages and traffic of all Government railways from 1870 to 1970 appears on plate 29 on page 342.

**Standardisation of railway gauges**

The completion of the standard gauge line from Broken Hill to Cockburn in November 1969 saw the final step in the standard gauge link between Fremantle (Western Australia) and Sydney (New South Wales). The first through freight services to operate between Sydney and Fremantle commenced on 12 January 1970 and the new passenger service over the same route was inaugurated on 23 February 1970. This passenger service has been named the *Indian-Pacific* after the oceans it links.

At this stage all mainland capital cities, except Adelaide, are linked by the standard gauge system. This system now extends from South Brisbane to Sydney via Kyogle (New South Wales); from Sydney to Melbourne via Albury (New South Wales); from Sydney to Cockburn (on the South Australia/New South Wales border) via Parkes and Broken Hill; from Cockburn to Port Pirie (South Australia); from Port Pirie to Kalgoorlie (Western Australia) via Port Augusta (South Australia); and from Kalgoorlie to Fremantle via Koolyanobbing, Merredin and Northam (Western Australia). Although the task of linking Australia by standard gauge was commenced in 1912 with the beginning of construction of the standard gauge line between Port Augusta and Kalgoorlie it took almost sixty years to complete. Major factors contributing to the delay in construction were a lack of funds and the failure of successive State and Commonwealth Governments to agree on matters concerning the introduction of the standard gauge.

GOVERNMENT RAILWAYS: AUSTRALIA, 1870 TO 1969-70  
ROUTE MILEAGE AND TRAFFIC

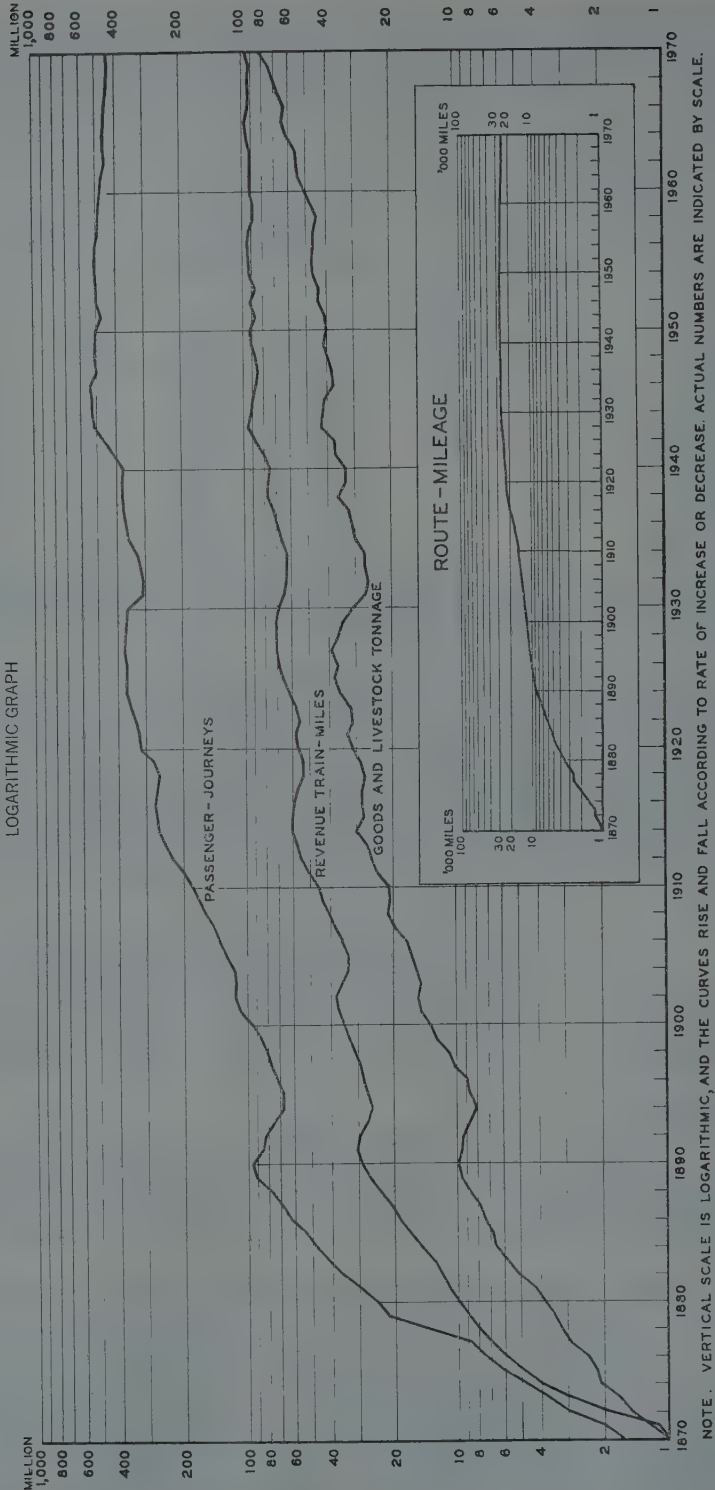


PLATE 29

The major benefits of standardisation are the saving in time and costs due to the elimination of the multiple handling of goods and the trans-shipment of passengers at points of break-in-gauge. The through freight services between Sydney and Perth will take  $3\frac{1}{2}$  days compared with the 8 to 10 days which applied previously. Similarly passenger services have been improved and travelling time cut from about 80 hours to 65 hours. Further improvements will follow as the new track settles down and higher operating speeds become possible.

The historical background to the standardisation of railway gauges is given in Year Book No. 53 pages 440-5, and a special article outlining the stages in the development and completion of the *Indian-Pacific* route (Perth-Sydney) is given in Year Book No. 56, pages 353-8.

#### Future developments in standardisation

The Commonwealth Government has announced its intention to finance a standard gauge connection between Adelaide and the new standard gauge railway. Details of the connection have yet to be decided. When this link is forged all mainland state capital cities will then be connected to the interstate standard gauge network. However, the most direct link between Adelaide and Melbourne will still be broad gauge (5ft 3in).

Work has commenced on a new standard gauge railway between Port Augusta and Whyalla (South Australia). This will be 47 miles long and will be owned and operated by Commonwealth Railways. It will connect Whyalla with the interstate standard gauge network. In addition to general goods and passenger traffic, it will be used for the carriage of considerable quantities of steel products which are at present transported by road between Whyalla and Port Augusta (for rail transport to Melbourne and Sydney).

The Commonwealth Government also has approved a proposal for a new standard gauge railway, about 522 miles long, between Tarcoola on the Trans-Australian Railway, and Alice Springs to replace the existing narrow gauge railway between Marree and Alice Springs. Work is expected to commence in 1971-72.

The Western Australian Government is considering the possibility of converting to standard gauge the existing narrow gauge railway between Kalgoorlie and Esperance, a distance of about 258 miles.

### Operations of Government railway systems

Particulars of train-mileages, passenger-journeys, passenger-miles, freight tons carried, and freight ton-miles included in this section refer only to operations for which revenue is received.

#### Summary of operations

##### GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, SYSTEMS, 1969-70

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
<b>Train-mileage</b>								
( <sup>000</sup> )(a)—								
Suburban passenger	10,358	8,361	1,979	2,090	1,377	118	..	24,283
Country passenger	10,358	4,738	3,479	1,180	927	217	841	21,740
Goods(b)	18,412	7,445	12,805	2,922	5,544	846	3,123	51,096
Total	39,128	20,543	18,263	6,192	7,848	1,180	3,963	97,119
<b>Passenger-journeys</b>								
( <sup>000</sup> )(c)—								
Suburban	236,347	140,309	26,317	13,441	10,227	712	..	427,354
Country(d)	15,231	4,000	2,197	549	352	194	244	22,768
Total	251,578	144,309	28,515	13,990	10,580	907	244	450,122
<b>Passenger-miles</b>								
( <sup>000</sup> )(e)—								
Suburban	n.a.	1,252,955	n.a.	108,790	n.a.	4,941	..	n.a.
Country	n.a.	355,755	n.a.	86,547	74,581	10,695	135,830	n.a.
Total	n.a.	1,608,710	n.a.	195,337	n.a.	15,636	135,830	n.a.
<b>Freight—</b>								
Tons carried ( <sup>000</sup> )(d)	33,442	11,835	14,439	5,888	10,665	1,258	4,824	82,351
Net ton-miles								
(million)(f)	5,384.3	2,037.2	3,110.2	947.6	1,749.1	119.5	1,312.5	14,660.5

(a) One train (i.e. a complete unit of locomotive and vehicles, electric train set, or rail motor) travelling one mile for revenue purposes. (b) Includes mixed train-mileage. (c) Based on ticket sales making allowances for periodical tickets. Tickets sold at concession rates are counted as full journeys. (d) Inter-system traffic is included in the total for each system (including each Commonwealth railway) over which it passes. (e) One passenger travelling one mile. (f) One ton carried one mile.



## Rolling stock

**GOVERNMENT RAILWAYS: ROLLING STOCK INCLUDED IN CAPITAL ACCOUNT**  
(Number)

System and date	Locomotives					Coaching stock(b)	Goods stock	Service stock
	Steam	Diesel-electric	Electric	Other(a)	Total			
30 June 1970—								
New South Wales . . .	129	389	41	35	594	(c)3,342	19,258	2,181
Victoria . . . . .	45	240	35	81	401	(c)2,401	20,342	1,619
Queensland . . . . .	15	326	..	74	415	1,291	20,441	2,110
South Australia . . .	4	145	..	..	149	(c)493	7,542	622
Western Australia . .	154	163	..	19	336	464	11,845	984
Tasmania . . . . .	20	37	..	21	78	126	2,227	180
Commonwealth . . . .	1	88	..	..	89	75	2,161	508
<b>Australia . . . . .</b>	<b>368</b>	<b>1,388</b>	<b>76</b>	<b>230</b>	<b>2,062</b>	<b>(d)8,281</b>	<b>(d)83,840</b>	<b>(d)8,205</b>
30 June—								
1969 . . . . .	753	1,283	76	209	2,321	8,127	84,584	7,972
1968 . . . . .	1,077	1,186	76	168	2,507	8,619	85,552	7,904
1967 . . . . .	1,337	1,054	76	156	2,623	8,727	86,887	7,920
1966 . . . . .	1,591	925	76	150	2,742	8,748	88,205	7,987
1965 . . . . .	1,782	821	76	147	2,826	8,777	88,781	8,144

(a) Includes non-passenger-carrying diesel power vans. (b) Includes all brake vans and non-powered electric train stock. (c) Excludes stock jointly-owned with other systems. (d) Includes jointly-owned stock.

## Train-mileage

## Train-mileage by type of service and automotive power

**GOVERNMENT RAILWAYS: TRAIN MILEAGE 1969-70**

('000 miles)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
Type of service—								
Passenger—suburban	10,358	8,361	1,979	2,090	1,377	118	..	24,283
Passenger—country .	10,358	4,738	3,479	1,180	927	217	841	21,740
Goods(a) . . . . .	18,412	7,445	12,805	2,922	5,544	846	3,123	51,096
<b>Total . . . . .</b>	<b>39,128</b>	<b>20,543</b>	<b>18,263</b>	<b>6,192</b>	<b>7,848</b>	<b>1,180</b>	<b>3,963</b>	<b>97,119</b>
Type of motive power—								
Hauled by diesel-electric locomotives	21,258	9,616	16,026	3,445	5,103	1,020	3,874	60,342
Hauled by steam locomotives . . . . .	1,168	16	182	61	1,356	6	2	2,791
Hauled by electric and other locomotives .	2,301	1,012	313	..	..	16	..	3,642
Powered coaching stock . . . . .	14,401	9,899	1,742	2,686	1,389	138	88	30,343
<b>Total . . . . .</b>	<b>39,128</b>	<b>20,543</b>	<b>18,263</b>	<b>6,192</b>	<b>7,848</b>	<b>1,180</b>	<b>3,963</b>	<b>97,119</b>

(a) Includes mixed train-miles.

## Total Train-mileage

**TRAIN MILEAGE**

('000 miles)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
1965-66 . . . . .	37,694	20,145	17,640	6,492	8,043	1,283	2,955	94,252
1966-67 . . . . .	37,638	20,035	16,876	6,584	8,316	1,275	2,958	93,682
1967-68 . . . . .	38,535	19,885	16,831	6,418	8,372	1,247	3,206	94,494
1968-69 . . . . .	38,201	19,689	17,109	6,176	7,901	1,197	3,559	93,832
1969-70 . . . . .	39,128	20,543	18,263	6,192	7,848	1,180	3,963	97,119

## Passenger traffic

## Passenger-journeys

GOVERNMENT RAILWAYS: PASSENGER-JOURNEYS(a), SYSTEMS, 1965-66 TO 1969-70  
(<sup>'000</sup>)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
SUBURBAN								
1965-66	242,216	144,332	23,227	14,671	9,748	1,097	..	435,291
1966-67	239,986	141,593	23,703	14,608	9,468	973	..	430,331
1967-68	238,061	141,733	24,065	14,447	9,628	870	..	428,804
1968-69	233,211	140,788	25,771	13,760	9,832	838	..	424,200
1969-70	236,347	140,309	26,317	13,441	10,227	712	..	427,354
COUNTRY(b)								
1965-66	15,352	4,793	2,752	840	419	207	342	24,705
1966-67	15,298	4,674	2,668	824	343	224	371	24,402
1967-68	15,253	4,535	2,526	795	342	217	347	24,015
1968-69	15,257	4,078	2,395	664	338	207	298	23,237
1969-70	15,231	4,000	2,197	549	352	194	244	22,768
TOTAL(b)								
1965-66	257,568	149,125	25,979	15,511	10,168	1,304	342	459,997
1966-67	255,284	146,268	26,372	15,432	9,811	1,197	371	454,735
1967-68	253,313	146,268	26,591	15,242	9,970	1,087	347	452,818
1968-69	248,469	144,866	28,165	14,423	10,170	1,045	298	447,437
1969-70	251,578	144,309	28,515	13,990	10,580	907	244	450,122

(a) Based on ticket sales making allowance for periodical tickets. Tickets sold at concession rates are counted as full journeys. (b) Inter-system traffic is included in the total for each system (including each Commonwealth railway) over which it passes.

## Passenger-miles

GOVERNMENT RAILWAYS: PASSENGER-MILES(a), SYSTEMS, 1965-66 TO 1969-70  
(<sup>'000</sup>)

Year	Vic.	S.A.	W.A.	Tas.	Cwlth
SUBURBAN					
1965-66	1,273,380	122,720	67,826	7,062	..
1966-67	1,256,759	121,549	n.a.	6,306	..
1967-68	1,250,058	117,764	n.a.	5,665	..
1968-69	1,263,823	112,039	n.a.	5,567	..
1969-70	1,252,955	108,790	n.a.	4,941	..
COUNTRY					
1965-66	396,226	95,410	66,968	11,132	121,351
1966-67	393,121	96,331	67,897	14,843	129,764
1967-68	375,783	89,629	68,065	11,427	119,772
1968-69	368,139	84,633	67,627	11,322	125,612
1969-70	355,755	86,547	74,581	10,695	135,830
TOTAL					
1965-66	1,669,606	218,130	134,794	18,194	121,351
1966-67	1,649,880	217,880	n.a.	21,149	129,764
1967-68	1,625,840	207,393	n.a.	17,092	119,772
1968-69	1,631,962	196,672	n.a.	16,889	125,612
1969-70	1,608,710	195,337	n.a.	15,636	135,830

(a) Particulars for New South Wales and Queensland, and in consequence the totals for Australia, are not available.

## Freight traffic

## Freight carried

GOVERNMENT RAILWAYS: FREIGHT CARRIED<sup>(a)</sup>, SYSTEMS

('000 tons)

Commodity and year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
1969-70—								
Wheat . . . . .	3,397	1,588	513	949	2,281	..	(b)	8,728
Other agricultural produce . . . . .	1,076	944	2,366	383	286	23	31	5,108
Coal, coke and briquettes . . . . .	15,385	1,396	7,068	7	135	94	2,126	26,211
Other minerals(c) . . . . .	3,100	143	1,125	1,705	5,436	30	1,172	12,711
Wool . . . . .	236	168	36	28	126	4	4	602
Fertilisers and manure . . . . .	396	883	116	324	560	111	7	2,397
Cement . . . . .	1,038	852	164	151	(d)	253	130	2,589
Timber . . . . .	334	493	122	73	333	392	36	1,783
Livestock . . . . .	258	294	734	172	84	15	168	1,725
All other commodities	8,222	5,074	2,193	2,094	(e)1,423	336	1,150	20,492
<b>Total . . . . .</b>	<b>33,442</b>	<b>11,835</b>	<b>14,439</b>	<b>5,888</b>	<b>10,665</b>	<b>1,258</b>	<b>4,824</b>	<b>82,351</b>
1968-69 . . . . .	31,871	11,316	12,975	5,003	8,934	1,242	4,401	75,742
1967-68 . . . . .	30,745	11,116	11,133	4,368	8,910	1,162	3,627	71,061
1966-67 . . . . .	29,275	12,075	10,185	4,876	7,873	1,079	3,121	68,484
1965-66 . . . . .	27,004	12,156	10,049	4,789	6,384	1,072	2,976	64,430
1964-65 . . . . .	27,889	12,596	10,031	5,089	5,229	1,091	2,919	64,844

(a) Inter-system traffic is included in the total for each system (including each Commonwealth railway) over which it passes. (b) Less than 500 tons. (c) Includes sand and gravel. (d) Cement included with 'All other commodities'. (e) Includes cement.

## Freight net ton-miles

## GOVERNMENT RAILWAYS: FREIGHT NET TON-MILES, SYSTEMS

(Million)

Commodity and year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
1969-70—								
Wheat . . . . .	1,038.1	296.8	(a)	91.0	375.7	..	0.1	n.a.
Other agricultural produce . . . . .	457.7	172.6	(a)	41.5	56.7	2.5	21.7	n.a.
Coal, coke and briquettes . . . . .	569.8	141.4	(a)	1.9	7.5	11.4	331.0	n.a.
Other minerals(b) . . . . .	412.0	12.9	(a)	252.9	659.2	1.1	147.0	n.a.
Wool . . . . .	58.7	22.6	(a)	5.3	32.0	0.5	2.4	n.a.
Fertilisers and manure . . . . .	122.1	145.2	(a)	56.8	106.6	18.9	4.7	n.a.
Cement . . . . .	159.5	58.8	(a)	17.3	(c)	13.1	8.5	n.a.
Timber . . . . .	138.3	78.1	(a)	12.7	85.9	20.3	28.9	n.a.
Livestock . . . . .	86.5	52.9	199.3	26.6	14.2	2.1	65.4	447.0
All other commodities	2,341.6	1,055.9	2,910.9	441.5	(d)411.2	49.5	702.8	7,913.4
<b>Total . . . . .</b>	<b>5,384.3</b>	<b>2,037.2</b>	<b>3,110.2</b>	<b>947.6</b>	<b>1,749.1</b>	<b>119.5</b>	<b>1,312.5</b>	<b>14,660.5</b>
1968-69 . . . . .	4,942.4	1,903.0	2,617.5	803.7	1,525.8	117.2	1,216.3	13,125.9
1967-68 . . . . .	4,844.1	1,776.2	2,201.3	680.9	1,571.7	117.2	1,072.3	12,263.7
1966-67 . . . . .	4,554.8	1,937.4	2,003.6	739.4	1,244.1	118.2	919.2	11,516.7
1965-66 . . . . .	4,281.8	1,989.5	2,002.0	749.3	1,020.8	113.4	881.4	11,038.2
1964-65 . . . . .	4,706.0	2,028.2	1,800.9	765.4	842.1	116.6	885.8	11,145.0

(a) Not available separately, included with 'All other commodities'. (b) Includes sand and gravel. (c) Cement included with 'All other commodities'. (d) Includes cement.



## Finance

GOVERNMENT RAILWAYS: GROSS EARNINGS(a), SYSTEMS, 1969-70  
(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
Coaching—								
Suburban passenger .	33,149	24,175	2,768	1,996	1,439	63	..	63,589
Country passenger .	16,582	7,521	3,886	1,657	2,051	139	2,824	34,661
Other . . . . .	7,230	4,223	3,129	895	1,599	210	635	17,921
Total, coaching .	(b)(c)58,648	35,919	9,782	4,548	5,090	412	3,458	(c)117,857
Freight (goods and live-stock)—								
Wheat . . . . .	(d)	9,711	4,186	3,817	11,312	..	1	n.a.
Other agricultural produce .	(d)	5,060	14,419	1,464	1,796	148	310	n.a.
Coal, coke and briquettes . . .	(d)	5,226	20,686	37	391	363	2,444	n.a.
Other minerals(e) .	(d)	370	10,617	7,472	10,393	73	2,401	n.a.
Wool . . . . .	(d)	1,448	1,250	172	1,815	39	58	n.a.
Fertilisers and manure .	(d)	3,189	1,360	965	2,822	853	39	n.a.
Cement . . . . .	(d)	2,745	1,626	439	(f)	739	191	n.a.
Timber . . . . .	(d)	2,895	1,591	315	2,514	1,063	314	n.a.
Livestock . . . .	3,333	1,521	8,987	1,122	628	101	959	16,651
All other commodities	171,333	29,602	31,333	10,474	(g)16,479	2,866	15,726	277,813
Total, freight .	(b)174,665	61,766	96,055	26,276	48,151	6,246	22,443	435,603
Miscellaneous . .	(b)13,974	7,360	2,994	2,516	2,803	261	1,747	31,655
Grand total . .	(b)247,288	105,045	108,831	33,340	56,044	6,920	27,649	585,116

(a) Excludes Government grants. (b) Includes State Co-ordination Tax Contribution. (c) Includes earnings which cannot be allocated among suburban, country or other coaching earnings. (d) Not available separately, included with 'All other commodities'. (e) Includes sand and gravel. (f) Cement included with 'All other commodities'. (g) Includes cement.

GOVERNMENT RAILWAYS: WORKING EXPENSES, SYSTEMS, 1969-70  
(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.(a)	Cwlth	Aust.
Maintenance of way and works . . . . .	35,372	23,969	28,879	(a)9,914	(a)14,351	2,129	8,037	122,651
Motive power(b) .	70,588	30,589	35,527	(a)13,228	(a)20,639	3,095	7,388	181,054
Traffic . . . . .	55,995	35,803	26,008	(a)10,797	13,152	2,555	4,934	149,244
Other charges . . .	55,706	28,196	6,117	5,102	6,849	1,253	6,796	110,019
Total . . . . .	217,660	118,558	96,530	(a)39,040	(a)54,992	9,031(a)	27,156	562,967

(a) Includes provision of reserves for depreciation. (b) Includes maintenance of rolling stock.

**GOVERNMENT RAILWAYS: GROSS EARNINGS, WORKING EXPENSES, AND NET EARNINGS  
SYSTEMS, 1965-66 TO 1969-70**  
(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwlth	Aust.
<b>GROSS EARNINGS</b>								
1965-66	195,336	99,519	84,178	28,947	42,571	5,985	18,091	474,627
1966-67	213,335	104,477	87,864	30,220	48,008	6,588	19,428	509,920
1967-68	224,966	99,301	94,018	28,046	51,628	6,587	22,233	526,779
1968-69	228,560	100,502	102,452	30,300	49,364	6,947	25,371	543,496
1969-70	247,288	105,045	108,831	33,340	56,044	6,920	27,649	585,116
<b>WORKING EXPENSES</b>								
				(a)	(a)	(a)	(a)	
1965-66	179,792	101,006	84,126	32,388	39,730	7,547	17,316	461,905
1966-67	184,992	103,423	84,295	33,962	44,513	8,325	19,411	478,921
1967-68	194,939	105,084	87,435	34,610	47,745	8,751	21,308	499,872
1968-69	205,164	111,216	91,427	36,154	49,947	9,089	24,614	527,611
1969-70	217,660	118,558	96,530	39,040	54,992	9,031	27,156	562,967
<b>NET EARNINGS(b)</b>								
1965-66	15,544	-1,486	52	-3,441	2,841	-1,561	775	12,724
1966-67	28,343	1,054	3,569	-3,742	3,496	-1,737	17	31,000
1967-68	30,027	-5,784	6,583	-6,564	3,883	-2,164	925	26,906
1968-69	23,396	-10,714	11,025	-5,854	-583	-2,142	757	15,885
1969-70	29,628	-13,513	12,301	-5,699	1,051	-2,111	493	22,150

(a) Includes provision of reserves for depreciation.  
in this table.

(b) Excess of gross earnings over working expenses as shown

**GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT, SYSTEMS, 30 JUNE 1970**  
(\$'000)

System	Net earnings—excess of gross earnings over working expenses	Plus grants and other earnings payable to railways			Less other expenses charged to railways					Surplus (+) or deficit (—)	
		State Government grants	Road motor earnings	Other	Total	Interest and exchange	Sinking fund	Road motor expenses (a)	Other		Total
New South Wales	29,628	(b)3,200	..	..	3,200	28,228	6,461	..	(c)948	35,637	—2,809
Victoria	—13,513	(d)9	66	..	74	7,161	330	153	..	7,645	—21,084
Queensland	12,301	..	..	..	..	24,681	(e)85	..	(f)1,400	26,166	(g)—13,865
South Australia	—5,699	(h)14,674	226	..	14,900	6,359	..	255	(i)686	7,300	1,900
Western Australia	1,051	..	1,196	..	1,196	10,547	..	1,273	..	11,821	—9,573
Tasmania	—2,111	..	..	(j)31	31	1,133	..	..	..	1,133	—3,214
Commonwealth	493	..	..	..	..	..	..	..	..	..	493
Australia	22,150	17,883	1,487	31	19,401	78,110	6,876	1,681	3,035	89,702	—48,152

(a) Includes interest and exchange. (b) Grants to meet losses on country developmental lines, to subsidise payments due from superannuation account. (c) Loan management and loan flotation expenses. (d) Kerang-Koondrook tramway recoup from Treasury. (e) Queensland 4 ft 8½ in gauge system only. (f) Demolished assets written off. (g) Includes deficit (\$733,029) on the Queensland 4 ft 8½ in gauge system. (h) Grants towards working expenses and debt charges. (i) Interest and repayment under Railway Standardisation and Railway Equipment Agreements. (j) Miscellaneous goods revenue from rail-ferry service traffic not carried by rail.

**Employment, salaries and wages**

The average number of staff employed and salaries and wages paid (\$'000) during the year 1969-70 were as follows: N.S.W. 43,845 (\$163,075), Vic. 26,429 (\$93,119), Qld 23,140 (\$76,220), S.A. 7,764 (\$30,880), W.A. 10,656 (\$37,590), Tas. 2,152 (\$7,024), Cwlth 3,620 (\$14,584), Aust. 117,606 (\$422,492).

### Private railways

Private railways are operated over a range of gauges and are to be found in each State of the Commonwealth. These systems service agricultural areas, mining ventures, industrial complexes and ports. A range of commodities are carried, including coal, iron ore, other minerals and manufactured products. In recent years there has been considerable growth in the total route mileage of private railways, from an estimated 300 route miles in 1965 to approximately 900 by 1970. The construction of 517 miles of heavy duty railway for north-west Western Australia iron ore projects accounts for much of the increase.

Three private railways projects are currently under construction. Each of these will function as an integral part of a mining operation. Two of these projects involving the transportation of iron ore are located in Western Australia. These are Hamersley Iron Proprietary Limited's extension of its Dampier-Mount Tom Price line to Paraburdoo (approximately 65 miles) and a railway is being constructed between Lambert and Mount Enid (approximately 104 miles) for Cliffs Western Australia Mining Company Proprietary Limited. The former is planned for completion in late 1971, the latter in April 1972. The third project involves the construction of a railway (approximately 14 miles) at Weipa, Queensland to service the Comalco Company's bauxite mining operation. Completion is planned for 1971. Further private rail construction connected with mining projects is planned for Western Australia.

In addition to the above, there are approximately 2,000 route miles of permanent privately owned sugar cane railways or 'tramways' along the north-east coast of Australia. The bulk of this is 2ft 0in gauge. Additional temporary lines are laid during the cane harvesting season. These lines connect 30 sugar mills to the Queensland Government Railway System. Other private railways exist within factory and industrial areas for the internal transport of goods and materials but at present no statistics are available as to the extent of the mileage involved and traffic task performed.

The carriage of passengers by private railways is now negligible; however, tonnages of freight carried are increasing as indicated in the following table.

#### PRIVATE RAILWAYS: ESTIMATED DOMESTIC FREIGHT TRAFFIC TASK(a) 1964-65 TO 1968-69

(Source: Department of Shipping and Transport)

Year	Tons carried	Private as a percentage of total tons carried(b)	Ton-miles	Private as a percentage of total ton-miles performed(b)
	'000	per cent	million	per cent
1964-65	29,632	31.4	391	3.4
1965-66	30,752	32.3	427	3.7
1966-67	35,895	34.4	1,141	9.0
1967-68	43,273	37.8	2,008	14.1
1968-69	52,545	41.0	3,347	20.3

(a) Includes tons and ton-miles performed by sugar tramways, but excludes internal industrial plant railways. (b) Total equals government plus private.

During the period 1964-65 to 1968-69 tonnages of freight carried and ton-miles performed increased by 77.3 and 756 per cent respectively. The extent of this growth has been such as to increase the private railway system's share of the total freight traffic task performed by all railways in Australia.

Mineral ores and concentrates are the predominant items of freight and, in contrast to the Government railways, carriage of general merchandise is of minor importance. The rapid growth of tons carried and ton-miles performed since 1964-65 reflects the growing traffic task performed by the Western Australian iron ore railways. In 1968-69 these railways alone carried 35 per cent of the total tonnage carried by all private railways, and accounted for 85 per cent of the ton-miles performed.

Details of location, ownership and operation of the major private railway systems is given in Year Book No. 56, 1970, page 364.



## TRAMWAY, TROLLEY-BUS, OMNIBUS, AND FERRY SERVICES

### Systems in operation

*Tramway and trolley-bus.* At 30 June 1970 tramway services were in operation in Melbourne, Bendigo and Ballarat, Victoria and in Adelaide, South Australia. The last of the trolley-bus services ceased to operate in Australia with their replacement by omnibuses in Perth, Western Australia on 29 August 1969.

In many parts of Australia private lines used for special purposes in connection with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways, and the traffic on them has nothing in common with that of the street tramways used for the conveyance of passengers, which are dealt with in this section. For further details, see page 349.

*Motor omnibus.* Services are operated by government or municipal authorities and private operators. Statistics are collected for government and municipal omnibus services located in all State capital cities; Canberra, Australian Capital Territory; Newcastle, New South Wales; Rockhampton, Queensland; Fremantle and the Eastern Goldfields area, Western Australia; Launceston and Burnie, Tasmania; Darwin, Northern Territory; and for country road services operated by the Western Australian Government Railways. Particulars of motor omnibus services under the control of private operators for the States of Victoria, Queensland, South Australia, and Western Australia are given in the annual bulletin *Transport and Communication*.

*Ferry.* Ferry passenger services are operated in the following States: New South Wales, at Sydney and Newcastle; Western Australia, on the Swan River at Perth; Tasmania, on the Mersey River at Devonport. Control is exercised by both governmental authorities and private operators. Particulars of the operations of these services are given in previous issues of this Year Book and in the annual bulletin *Transport and Communication*. In Victoria and Queensland the services operated are not extensive. There are no ferry passenger services in South Australia.

### Government and municipal tramway, trolley-bus and omnibus services

Because of the development in recent years of the various forms of public road transport under the control of single authorities, and the gradual replacement of tramway and trolley-bus services by motor omnibus services, it is not possible to obtain separate statistics for all phases of the activities of each form of transport, particularly financial operations. The two following tables present combined statistics of public tramway, trolley-bus and motor omnibus services with separate details shown for each form of transport where possible.

TRAMWAY, TROLLEY-BUS AND OMNIBUS SERVICES: GOVERNMENT  
AND MUNICIPAL, STATES AND TERRITORIES, 1969-70

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-miles at 30 June—									
Tram(a) . . . . . miles	..	156	..	7	..	..	..	..	163
Trolley-bus . . . . . "	612	139	387	163	(b) 5,533	223	56	85	7,198
Omnibus . . . . . "	..	..	..	..	..	..	..	..	..
Vehicle-miles—									
Tram . . . . . '000	..	16,074	..	419	..	..	..	..	16,492
Trolley-bus . . . . . "	..	..	..	..	(b) 66	..	..	..	66
Omnibus . . . . . "	44,574	6,923	14,769	10,239	23,205	5,430	680	3,120	108,940
Rolling stock at 30 June—									
Tram . . . . . number	..	754	..	26	..	..	..	..	780
Trolley-bus . . . . . "	..	..	..	..	(b) 772	278	28	128	4,345
Omnibus . . . . . "	1,815	277	703	344	..	..	..	..	..
Passenger-journeys—									
Tram . . . . . '000	..	113,594	..	1,703	..	..	..	..	115,297
Trolley-bus . . . . . "	..	..	..	..	(b) 276	..	..	..	276
Omnibus . . . . . "	235,980	22,353	73,349	41,642	56,634	20,707	1,218	7,701	459,583
Gross revenue(c)—									
Tram, trolley-bus and omni-bus . . . \$'000	32,252	20,579	8,342	6,696	9,025	2,332	340	976	80,542
Working expenses(d)—									
Tram, trolley-bus and omni-bus . . . \$'000	36,188	20,327	8,439	6,293	9,555	3,237	448	1,443	85,929
Net revenue—									
Tram, trolley-bus and omni-bus . . . \$'000	-3,936	252	-98	403	-531	-905	-108	-466	-5,387
Employees at 30 June—									
Tram, trolley-bus and omni-bus . . . number	7,436	4,328	1,969	1,275	1,919	631	34	189	17,781
Accidents—									
Tram, trolley-bus and omni-bus(e)—									
Persons killed . . . number	8	19	2	3	1	..	1	..	33
Persons injured . . . "	1,231	569	108	127	304	25	1	51	2,416

(a) Gauge 4ft 8½in throughout. (b) Trolley-bus services ceased on 29 August 1969. (c) Excludes government grants. (d) Includes provision of reserves for depreciation, etc., where possible. (e) Excludes accidents to employees. Minus sign (—) denotes deficit.



## MOTOR VEHICLES ON THE REGISTER, BY TYPE OF VEHICLES(a)

Other motor vehicles											
State or Territory and year	Motor cars	Station wagons	Total	Utilities	Panel vans	Trucks	Other truck- types	Omni- buses	Total	Motor cycles	Total
31 December 1970—											
New South Wales . . .	1,146,507	237,471	1,383,978	129,213	70,718	113,603	4,221	7,527	325,282	55,035	1,764,295
Victoria . . .	903,247	194,893	1,098,140	92,323	38,950	93,508	3,820	4,962	233,563	24,847	1,356,550
Queensland . . .	n.a.	n.a.	518,954	(b)101,388	(b)	(c)64,492	(c)	3,347	169,227	22,722	710,903
South Australia . . .	319,788	58,311	378,099	37,567	12,191	35,125	1,865	2,608	89,356	14,851	482,306
Western Australia . . .	n.a.	n.a.	328,300	n.a.	n.a.	n.a.	n.a.	n.a.	102,800	12,200	443,300
Tasmania . . .	105,200	17,590	122,790	14,310	7,920	10,890	340	1,293	34,753	3,281	160,824
Northern Territory . . .	11,264	5,157	16,421	5,568	1,220	2,213	69	178	9,248	1,395	27,064
Australian Capital Territory . . .	42,626	9,180	51,806	3,120	2,058	1,665	141	285	7,269	2,129	61,204
Australia . . .	n.a.	n.a.	3,898,488	n.a.	n.a.	n.a.	n.a.	n.a.	971,498	136,460	5,006,446
31 December—											
1969 . . .	n.a.	n.a.	3,676,241	570,672	(b)	357,797	(c)	21,118	949,587	113,684	4,739,512
1968 . . .	n.a.	n.a.	3,444,806	558,439	(b)	343,539	(c)	19,727	921,705	96,740	4,463,251
1967 . . .	n.a.	n.a.	3,241,485	550,862	(b)	331,626	(c)	18,730	901,218	80,193	4,222,896
1966 . . .	n.a.	n.a.	3,060,578	544,459	(b)	326,025	(c)	17,934	888,418	68,913	4,017,909
1965 . . .	n.a.	n.a.	2,895,891	542,440	(b)	314,198	(c)	17,018	873,656	67,339	3,836,886
1962(d) . . .	2,068,698	231,436	2,300,134	414,156	119,897	270,881	8,091	14,319	827,344	81,859	3,209,337

(a) All figures after December 1962 are subject to revision. (b) Panel vans included with utilities. (c) Other truck-types included with trucks. (d) Motor vehicle census figures.

MOTOR VEHICLES(a) ON REGISTER PER 1,000 OF POPULATION  
STATES AND TERRITORIES, 1962 TO 1970

31 December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1962(b) . . .	280	301	286	339	326	293	229	316	296
1966(c) . . .	329	342	344	371	379	355	279	381	343
1967(c) . . .	341	351	353	378	394	365	300	395	354
1968(c) . . .	354	364	364	386	409	381	322	411	367
1969(c) . . .	369	376	378	399	430	394	350	422	381
1970(c) . . .	382	390	391	410	443	407	365	438	394

(a) Excludes tractors, trailers, plant and equipment, etc. (b) Based on motor vehicle census figures. (c) Subject to revision.

## Registrations of new motor vehicles

Particulars of registrations of new motor vehicles are shown by type and make of vehicle in the annual bulletin *Transport and Communication*, and by type, make, and horsepower of vehicle in monthly and annual bulletins of Motor Vehicle Registrations.

In these statistics 'registrations' means registrations processed by the motor vehicle registration authorities in the States and Territories during the period.

## REGISTRATIONS OF NEW MOTOR VEHICLES, BY TYPE OF VEHICLE

State or Territory and year	Motor cars	Station wagons	Ambu- lances and hearses	Utilities	Panel vans	Trucks	Other truck- types	Omni- buses	Motor cycles	Total
1970—										
New South Wales . . .	137,563	19,896	161	12,342	8,919	8,847	463	806	14,476	203,473
Victoria . . .	97,917	14,609	85	6,972	3,933	7,464	520	532	5,906	137,938
Queensland . . .	39,880	7,454	90	5,979	1,841	(a)6,524	(a)11	184	5,072	67,035
South Australia . . .	34,311	4,309	45	2,912	1,248	2,227	115	280	2,994	48,441
Western Australia . . .	31,402	6,038	26	5,115	2,312	3,112	128	218	2,305	50,656
Tasmania . . .	10,364	1,250	11	1,144	532	692	28	98	804	14,923
Northern Territory . . .	1,305	496	6	951	165	347	10	28	558	3,866
Australian Capital Territory . . .	5,439	828	2	466	325	263	14	44	586	7,967
Australia . . .	358,181	54,878	426	35,881	19,275	29,476	1,289	2,190	32,701	534,297
1969 . . .	343,275	57,604	355	36,510	17,266	29,700	1,407	2,041	25,386	513,544
1968 . . .	310,051	58,569	393	34,734	16,318	26,705	970	1,745	22,887	472,372
1967 . . .	275,594	59,947	329	34,726	15,546	24,590	871	1,470	17,306	430,379
1966 . . .	245,175	61,513	349	33,154	13,351	22,970	837	1,399	9,738	388,486
1965 . . .	258,082	73,673	346	32,948	14,177	25,373	886	1,544	8,056	415,085

(a) Most other truck-types included with trucks.



## Drivers' and riders' licences

At 30 June 1970 the numbers of licences in force to drive or ride motor vehicles were: New South Wales, 2,034 309; Victoria, 1,502,074; South Australia, 523,311; Western Australia, 431,499; Tasmania, 166,215; Northern Territory, 37,108; Australian Capital Territory, 82,081. Particulars are not available for Queensland.

## ROAD TRAFFIC ACCIDENTS

## Accidents involving casualties, persons killed, persons injured

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): NUMBER OF  
ACCIDENTS, PERSONS KILLED OR INJURED  
STATES AND TERRITORIES, 1969

State or Territory	Number of accidents	Persons killed	Persons injured	Per 100,000 of mean population			Per 10,000 motor vehicles registered(b)		
				Number of accidents	Persons killed	Persons injured	Number of accidents	Persons killed	Persons injured
New South Wales	24,164	1,188	32,752	539	27	731	149	7	202
Victoria	16,527	1,011	23,797	488	30	703	132	8	190
Queensland	7,494	556	10,406	424	31	588	114	8	159
South Australia	6,895	251	9,961	602	22	870	153	6	221
Western Australia	4,809	311	6,788	508	33	717	121	8	170
Tasmania	1,416	114	2,264	364	29	583	94	8	151
Northern Territory	500	45	727	733	66	1,066	218	20	318
Australian Capital Territory	792	26	1,169	648	21	956	155	5	229
Australia	62,597	3,502	87,864	509	28	714	136	8	191

(a) Accidents reported to the police which occurred in public thoroughfares and which resulted in death within thirty days or in bodily injury to an extent requiring surgical or medical treatment. (b) Average number of motor vehicles on register.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): NUMBER OF  
ACCIDENTS, PERSONS KILLED OR INJURED  
STATES AND TERRITORIES, 1965 TO 1969

Year	N.S.W.	Vic.	Qld	S.A. (b)	W.A.	Tas.	N.T.	A.C.T.	Total		
									Num- ber	Per 100,000 of mean popu- lation	Per 10,000 motor vehicles regis- tered(c)
Accidents involving casualties—											
1965 . . .	21,052	14,336	7,134	7,267	4,170	1,206	232	535	55,932	491	150
1966 . . .	20,919	14,084	6,878	7,031	4,346	1,377	310	593	55,538	479	141
1967 . . .	21,610	14,331	7,015	7,242	4,659	1,342	359	695	57,253	484	139
1968 . . .	22,774	15,377	7,118	6,421	4,708	1,240	357	764	58,759	488	135
1969 . . .	24,164	16,527	7,494	6,895	4,809	1,416	500	792	62,597	509	136
Persons killed—											
1965 . . .	1,151	929	467	243	252	93	14	15	3,164	28	8
1966 . . .	1,143	955	466	270	253	104	34	17	3,242	28	8
1967 . . .	1,117	887	502	253	256	101	27	23	3,166	27	8
1968 . . .	1,211	949	477	275	320	118	18	14	3,382	28	8
1969 . . .	1,188	1,011	556	251	311	114	45	26	3,502	28	8
Persons injured—											
1965 . . .	29,157	20,446	10,078	9,491	5,638	1,815	329	769	77,723	682	208
1966 . . .	28,981	20,160	9,936	9,369	5,997	2,092	446	856	77,837	671	198
1967 . . .	29,501	20,636	9,850	9,955	6,426	2,095	541	1,017	80,021	677	194
1968 . . .	30,919	22,095	10,151	8,902	6,553	1,928	512	1,150	82,210	683	198
1969 . . .	32,752	23,797	10,406	9,961	6,788	2,264	727	1,169	87,864	714	191

(a) See footnote (a) to previous table. (b) Prior to 1 October 1967 includes accidents in which the injured persons did not require surgical or medical treatment and the number of persons injured in accidents who did not require surgical or medical treatment. (c) See footnote (b) to previous table.

## Types of road user killed or injured

Responsibility for cause of accident is not indicated by this classification.

**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): PERSONS KILLED OR INJURED  
TYPES OF ROAD USER INVOLVED, STATES AND TERRITORIES, 1969**

Type of road user	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
<b>PERSONS KILLED</b>									
Drivers of motor vehicles	436	403	226	108	124	43	13	8	1,361
Motor cyclists	75	22	19	6	18	3	1	4	148
Pedal cyclists	19	38	18	16	9	2	..	..	102
Passengers (all types)(b)	362	289	184	66	87	41	18	13	1,060
Pedestrians	294	255	109	55	73	25	13	1	825
Other classes(c)	2	4	..	..	..	..	..	..	6
<b>Total</b>	<b>1,188</b>	<b>1,011</b>	<b>556</b>	<b>251</b>	<b>311</b>	<b>114</b>	<b>45</b>	<b>26</b>	<b>3,502</b>

<b>PERSONS INJURED</b>									
Drivers of motor vehicles	12,515	9,788	4,184	3,990	2,863	983	306	538	35,167
Motor cyclists	2,562	683	715	728	325	107	64	100	5,284
Pedal cyclists	844	1,033	457	530	340	44	9	46	3,303
Passengers (all types)(b)	12,343	9,475	4,112	3,905	2,519	975	305	414	34,048
Pedestrians	4,469	2,781	930	804	715	155	43	67	9,964
Other classes(c)	19	37	8	4	26	..	..	4	98
<b>Total</b>	<b>32,752</b>	<b>23,797</b>	<b>10,406</b>	<b>9,961</b>	<b>6,788</b>	<b>2,264</b>	<b>727</b>	<b>1,169</b>	<b>87,864</b>

(a) Accidents reported to the police which occurred in public thoroughfares and which resulted in death within thirty days or in bodily injury to an extent requiring surgical or medical treatment. (b) Includes pillion riders. (c) Includes tram drivers, riders of horses and drivers of animal-drawn vehicles.

## Age groups of persons killed or injured

**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): PERSONS KILLED OR INJURED  
BY AGE GROUP: STATES AND TERRITORIES, 1969**

Age group (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>PERSONS KILLED</b>									
Under 5	35	34	23	12	13	6	..	..	123
5 and under 7	18	11	8	5	6	1	..	..	49
7 " " 17	82	87	51	27	27	7	5	4	290
17 " " 21	183	186	94	48	56	25	3	13	608
21 " " 30	232	202	94	38	70	19	19	2	676
30 " " 40	144	96	65	30	35	12	5	3	390
40 " " 50	126	92	61	29	27	7	5	1	348
50 " " 60	131	104	61	17	21	15	3	2	354
60 and over	235	197	99	40	56	20	3	1	651
Not stated	2	2	..	5	..	2	2	..	13
<b>Total</b>	<b>1,188</b>	<b>1,011</b>	<b>556</b>	<b>251</b>	<b>311</b>	<b>114</b>	<b>45</b>	<b>26</b>	<b>3,502</b>

<b>PERSONS INJURED</b>									
Under 5	1,000	853	321	268	261	54	23	40	2,820
5 and under 7	629	481	192	145	134	35	18	21	1,655
7 " " 17	3,629	2,680	1,379	1,292	867	292	45	124	10,308
17 " " 21	7,343	5,007	2,461	2,163	1,383	539	109	316	19,321
21 " " 30	7,765	5,611	2,218	1,745	1,293	488	253	282	19,655
30 " " 40	3,739	2,844	1,086	906	728	220	132	150	9,805
40 " " 50	3,314	2,535	988	898	608	201	60	93	8,697
50 " " 60	2,547	1,727	812	635	424	144	40	71	6,400
60 and over	2,397	1,675	784	562	501	158	20	65	6,162
Not stated	389	384	165	1,347	589	133	27	7	3,041
<b>Total</b>	<b>32,752</b>	<b>23,797</b>	<b>10,406</b>	<b>9,961</b>	<b>6,788</b>	<b>2,264</b>	<b>727</b>	<b>1,169</b>	<b>87,864</b>

(a) See footnote (a) to table above.

## Types of accidents

**ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a)**  
**NUMBER OF ACCIDENTS AND PERSONS KILLED OR INJURED, BY TYPE OF ACCIDENT**  
**STATES AND TERRITORIES, 1969**

<i>Type of accident</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>NUMBER OF ACCIDENTS</b>									
Collisions between vehicles . . .	12,948	9,203	3,504	3,926	2,759	804	198	490	33,832
Vehicle overturning or leaving road . . .	3,213	1,189	2,548	847	1,075	380	202	185	9,639
Vehicle colliding with pedestrian . . .	4,381	2,807	978	791	755	170	54	68	10,004
Vehicle colliding with fixed object(b) . . .	3,326	3,116	292	1,231	157	55	30	36	8,243
Passenger accidents . . .	145	92	51	42	25	3	6	3	367
Vehicle colliding with animal . . .	150	86	90	39	18	4	9	6	402
Other . . .	1	34	31	19	20	..	1	4	110
<b>Total . . .</b>	<b>24,164</b>	<b>16,527</b>	<b>7,494</b>	<b>6,895</b>	<b>4,809</b>	<b>1,416</b>	<b>500</b>	<b>792</b>	<b>62,597</b>
<b>PERSONS KILLED</b>									
Collisions between vehicles . . .	508	403	228	107	103	40	9	8	1,406
Vehicle overturning or leaving road . . .	180	95	212	26	121	45	22	17	718
Vehicle colliding with pedestrian . . .	291	252	108	52	74	26	13	1	817
Vehicle colliding with fixed object(b) . . .	197	253	4	62	7	2	1	..	526
Passenger accidents . . .	10	6	2	3	3	..	..	..	24
Vehicle colliding with animal . . .	2	1	1	1	2	1	..	..	8
Other . . .	..	1	1	..	1	..	..	..	3
<b>Total . . .</b>	<b>1,188</b>	<b>1,011</b>	<b>556</b>	<b>251</b>	<b>311</b>	<b>114</b>	<b>45</b>	<b>26</b>	<b>3,502</b>
<b>PERSONS INJURED</b>									
Collisions between vehicles . . .	19,168	14,679	5,385	6,067	4,292	1,440	322	801	52,154
Vehicle overturning or leaving road . . .	4,344	1,754	3,509	1,267	1,501	578	299	243	13,495
Vehicle colliding with pedestrian . . .	4,363	2,667	931	807	730	164	44	68	9,774
Vehicle colliding with fixed object(b) . . .	4,551	4,461	387	1,708	201	67	39	43	11,457
Passenger accidents . . .	146	90	51	46	22	3	7	3	368
Vehicle colliding with animal . . .	179	107	106	46	20	12	13	7	490
Other . . .	1	39	37	20	22	..	3	4	126
<b>Total . . .</b>	<b>32,752</b>	<b>23,797</b>	<b>10,406</b>	<b>9,961</b>	<b>6,788</b>	<b>2,264</b>	<b>727</b>	<b>1,169</b>	<b>87,864</b>

(a) Accidents reported to the police which occurred in public thoroughfares and which resulted in death within thirty days or in bodily injury to an extent requiring surgical or medical treatment. (b) Includes parked vehicles.



## ROADS

## Summary of roads used for general traffic

*Proclaimed or declared roads.* The table following is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30 June 1970. The central road authority in each State assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance of these roads, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points: availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; the value of the roads as connecting links between centres of population or business; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main roads. The absence of a particular class in any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes, e.g. insufficiency of funds, man-power or materials, etc., construction or maintenance may not keep pace with gazettals of mileages, and, therefore, the condition of a road may not match its status.

## PROCLAIMED OR DECLARED ROADS: LENGTHS, STATES, 30 JUNE 1970

(Miles)

<i>Class of road</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i> <i>(a)(b)</i>	<i>Tas.</i>	<i>Total</i>	
State highways . . .	6,569	(c)4,506	6,319	8,156	6,414	1,229	63,847	
Trunk roads . . .	4,245	9,066	77			662		
Ordinary main roads . . .	11,568		5,036					
<i>Total main roads . . .</i>	<i>22,382</i>	<i>13,572</i>	<i>11,432</i>	<i>8,156</i>	<i>6,414</i>	<i>1,891</i>	<i>63,847</i>	
Secondary roads . . .	(d)176	..	(e)8,602	..	6,020	193	14,991	
Developmental roads . . .	2,741	..	4,779	..	..	85	7,605	
Tourist roads . . .	219	483	..	..	..	47	749	
Other roads . . .	..	(f)578	..	..	..	93	671	
<i>Total other roads . . .</i>	<i>3,136</i>	<i>1,061</i>	<i>13,381</i>	<i>..</i>	<i>6,020</i>	<i>418</i>	<i>24,016</i>	
<b>Grand total . . .</b>	<b>25,518</b>	<b>14,633</b>	<b>24,813</b>	<b>8,156</b>	<b>12,434</b>	<b>2,309</b>	<b>87,863</b>	

(a) 30 June 1969. (b) Main Roads Department revised series. (c) Includes by-pass roads. (d) Metropolitan only. (e) Includes mining access roads, farmers' roads and tourist tracks. (f) Forest roads.

*Total roads.* The following table represents an attempt to classify all the roads open for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad surface groups. The figures in the table for the States are obtained from the Deputy Commonwealth Statistician in each State, and are derived mainly from local government sources.

ALL ROADS OPEN FOR GENERAL TRAFFIC  
LENGTHS, STATES AND TERRITORIES, 30 JUNE 1970

(Miles)

<i>Surface of roads</i>	<i>N.S.W.</i> <i>(a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i> <i>(a)(b)</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Total</i>
Bitumen or concrete	33,494	31,421	20,123	9,484	15,980	3,893	2,320	588	117,303
Gravel, crushed stone or other improved surface . . .	41,659	28,757	18,767	18,703	14,948	8,557	1,216	248	132,855
Formed only . . .	28,169	20,704	40,168	7,637	27,308	1,334	1,827	26	299,316
Cleared only . . .	26,423	20,170	40,167	39,467	39,110		6,806	..	
<b>Total . . .</b>	<b>129,745</b>	<b>101,052</b>	<b>119,225</b>	<b>75,291</b>	<b>97,348</b>	<b>13,784</b>	<b>12,169</b>	<b>862</b>	<b>549,476</b>

(a) 30 June 1969. (b) Main Roads Department revised series.

Further information on roads, including financial particulars, is included in Chapter 19, Local Government.

### Australian Road Research Board

The Australian Road Research Board was established by the road authorities of the Commonwealth and State Governments in 1960 as a national centre for road research. The Board was incorporated in January 1965 as a public company by guarantee, memoranda and articles of association being drafted in general conformity with the constitution which had been accepted in 1960. The company members are the Commonwealth of Australia, the commissioners of the central road authorities in New South Wales, Queensland, South Australia, and Western Australia, the Department of Public Works, Tasmania, and the Country Roads Board, Victoria. The Director-General of the Commonwealth Department of Public Works and the departmental heads of the other road authorities constitute the Board, which controls all policy and activities. Finance for all activities has been provided by the company members on an agreed basis.

The objectives of A.R.R.B. include planning an adequate programme of research and development, arranging for individual projects to be carried out directly and by co-operating organisations, and providing conferences and publications to bring these and other advances to everyone interested in roads. Publications include *Proceedings* of biennial national research conferences commencing in 1962, the journal *Australian Road Research* issued four times a year, and separate reports and bulletins resulting from special research projects. The following list of possible subjects indicates the range of studies provided for in the original constitution: road planning, location, design, safety, materials, construction, maintenance, structures, equipment, traffic and transport, economics, administration, financing, management, accounting, and any other matters affecting the provision, upkeep, use, protection, and development of roads. In planning a creative programme the Board continues to look for those subjects which seem to offer the highest profit to road engineers and the community.

The work on research projects is carried out either directly by the Board's own staff, in many cases acting in co-operation with the road authorities of the various governments, or through co-operative projects established with universities. The Board has endeavoured to provide or sustain the additional staff required for these external projects, but university staff members furnish advice and co-operation in all parts of these studies.

As with most research organisations, the Board has made very full use of systematic consultation through various advisory groups. Members of these groups have been recruited from persons with the ability to contribute, who were prepared to serve as individuals and not as representatives of particular organisations. In an attempt to secure completely unfettered counsel, most of the members of the advisory groups were drawn from outside the Board and its staff. The various committees include a general Advisory Council and several particular types of specialist committees. In addition, the technical committees of the National Association of Australian State Road Authorities have, from the initiation of A.R.R.B., been a continuing and valuable source of advice and consultation. In this way, therefore, exceedingly valuable advice has been obtained from individuals drawn from the State road authorities, local authorities, C.S.I.R.O., Australian universities, several Commonwealth departments, and from private companies and consultants.

### Commonwealth Bureau of Roads

The Commonwealth Bureau of Roads is a Statutory Authority established under the provisions of the *Commonwealth Bureau of Roads Act 1964*. The Bureau consists of a full-time Chairman and two part-time Members appointed by the Governor-General and is served by a small secretariat. Broadly, the responsibilities of the Bureau are to advise the Commonwealth Government, through the Minister for Shipping and Transport, on matters relating to roads and road transport and government financial assistance in this area.

## CIVIL AVIATION

### Department of Civil Aviation

Control of civil aviation in Australia is exercised by the Department of Civil Aviation, which was established in 1939 to take over from the Civil Aviation Board the regulation of civil aviation in Australia. The Department's jurisdiction covers not only Australia but also Papua, New Guinea and areas of the Indian and Pacific Oceans. Year Books Nos 16, 19 and 38 trace the establishment of civil aviation control in Australia and the appropriate Acts of Parliament and Regulations under which this control is exercised. The present functions of the Department are shown in Year Book No. 51, pages 578-9, and further details about its operations are given in the annual reports to the Commonwealth Parliament by the Minister for Civil Aviation.

### Regular air services within Australia

*Interstate services.* Scheduled interstate services with passenger and all-freight aircraft are provided by two airlines only, the private enterprise airline Ansett Airlines of Australia (a subsidiary of Ansett Transport Industries) and the Commonwealth-owned Trans-Australia Airlines. All principal routes are competitive, with both airlines providing equal capacities in accord with legislation passed by the Commonwealth Parliament. The two principal Acts which establish the legislative basis of this controlled competition are the *Airlines Agreement Act 1952-1961* and the *Airlines Equipment Act 1958*. The Airlines Equipment Act established the machinery for the achievement and maintenance of comparable, but not necessarily identical, aircraft fleets between T.A.A. and Ansett Airlines of Australia, and is designed to prevent the provision of excess aircraft capacity. The Airlines Agreement Act established the basis of control of the two-airline competitive system and extended this machinery to 1977.

In addition to purely interstate services, both Ansett Airlines of Australia and Trans-Australia Airlines operate routes to New Guinea and non-competitive intrastate routes in Australia. The Ansett Airlines of Australia non-competitive routes radiate mainly from Melbourne, while those of Trans-Australia Airlines are located within Queensland. In addition, Trans-Australia Airlines operate services within Papua-New Guinea in competition with another Ansett subsidiary, Ansett Airlines of Papua and New Guinea and Papuan Airlines Pty Ltd.

At 30 June 1970 the Ansett Airlines of Australia fleet included five Boeing 727's, seven DC-9's, three Electras, one Viscount, nine Friendships, three Carvairs, a number of DC-4's and two helicopters. At the same date Trans-Australia Airlines operated a fleet of five Boeing 727's, seven DC-9's, three Electras, two Viscounts, twelve Friendships and smaller aircraft.

*Intrastate services.* In addition to the intrastate services operated by Ansett Airlines of Australia and Trans-Australia Airlines there are a number of smaller regional airlines operating from Sydney (Airlines of New South Wales and East-West Airlines), Adelaide (Airlines of South Australia), Perth (MacRobertson Miller Airlines), and Alice Springs (Connellan Airways). With the exception of Connellan Airways, which provides regular service to outback homesteads and communities, all of these are concerned primarily with traffic moving to and from the respective capital city. With the exception of the independently owned East-West Airlines and Connellan Airways, all regional airlines are subsidiaries of Ansett Transport Industries. The larger aircraft used by these regional airlines are Fellowships, Friendships and Convairs. Connellan Airways uses smaller aircraft types.

*Commuter services.* These are not airline services but regular flights by charter firms with small single and twin-engined aircraft operating to fixed and published timetables. They provide regular air links between many centres, towns and country areas which are either not served by the major airlines or have no direct air service with their capital or nearest major provincial city. The first commuter service approved was for Opal Air Pty Ltd, of Coober Pedy (S.A.), to operate between Adelaide and the South Australian opal fields. At 30 June 1970 eighteen charter operators were operating commuter services in Australia. Details of the operations of these commuter services are excluded from the statistics shown in this section.

*Internal operations.* Particulars of the revenue operations of all regular internal air services during each of the years 1965-66 to 1969-70 are set out in the next table.

CIVIL AVIATION: OPERATIONS OF REGULAR INTERNAL SERVICES  
AUSTRALIA(a), 1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
Hours flown . . . . . number	261,535	255,510	240,801	244,606	251,582
Miles flown . . . . . '000	55,020	56,759	56,724	60,348	66,241
Passengers—					
Embarkations . . . . . number	4,157,873	4,424,652	4,668,153	5,184,828	5,911,002
Passenger-miles . . . . . '000	1,831,360	1,972,469	2,125,314	2,401,783	2,802,717
Freight—					
Tons uplifted . . . . . short tons	76,079	82,056	85,063	89,947	100,100
Ton-miles(b) . . . . . '000	37,577	40,148	42,320	45,521	51,021
Mail—					
Tons uplifted . . . . . short tons	8,633	9,587	9,417	9,876	10,625
Ton-miles(b) . . . . . '000	4,587	5,144	5,174	5,498	5,950

(a) Includes flights of all Australian-owned airlines, with the exception of those of Qantas Airways Limited, between airports located within the Commonwealth. (b) In terms of short tons.



*Internal passenger embarkations and disembarkations*

Traffic statistics have been compiled by aggregating for all individual airline flights the traffic loaded and unloaded at each airport. Flights between Australia and Papua-New Guinea and Australia and Norfolk Island are included. At ports where different flights connect, figures are overstated to the extent of the through traffic transferring between flights.

**INTERNAL AIRWAYS PASSENGER EMBARKATIONS AND  
DISEMBARKATIONS AT PRINCIPAL AUSTRALIAN AIRPORTS  
1965-66 TO 1969-70**

<i>Airport</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Sydney . . . . .	2,244,218	2,435,284	2,641,147	2,933,795	3,390,322
Melbourne . . . . .	1,748,478	1,880,860	2,043,542	2,278,032	2,603,320
Brisbane . . . . .	814,097	854,370	937,660	1,009,060	1,184,846
Adelaide . . . . .	738,402	770,408	863,652	930,207	1,016,689
Canberra . . . . .	331,203	341,058	410,701	461,888	541,791
Perth . . . . .	257,406	278,662	315,744	357,236	420,603
Hobart . . . . .	167,077	178,314	182,459	196,335	200,638
Townsville . . . . .	152,384	145,161	188,761	168,247	197,107
Launceston . . . . .	155,057	159,402	156,443	171,612	179,614
Coolangatta . . . . .	88,456	97,343	85,543	102,764	132,102
Cairns . . . . .	83,996	86,598	92,048	101,031	127,252
Darwin . . . . .	49,131	57,557	65,535	78,165	98,523
Mackay . . . . .	72,411	72,407	78,179	87,313	95,841
Rockhampton . . . . .	63,250	65,777	68,150	74,760	83,883
Devonport . . . . .	48,089	55,213	61,250	68,125	68,257
Wynyard . . . . .	40,617	51,932	54,888	57,132	63,041
Dubbo . . . . .	41,903	44,852	49,856	51,775	56,014
Wagga . . . . .	46,179	53,273	46,314	49,519	54,378
Alice Springs . . . . .	24,544	28,419	34,953	39,549	52,522
Mount Isa . . . . .	31,373	33,507	34,013	37,423	52,272
Tamworth . . . . .	37,589	38,141	41,960	46,558	51,640
Kingscote . . . . .	42,197	44,764	44,316	45,993	50,878

**International activity**

*International organisations.* A full report of the formation of the International Civil Aviation Organization, the Commonwealth Air Transport Council, and the South Pacific Air Transport Council appeared in Year Book No. 37, and particulars of subsequent activity in the international field were included in No. 38. The International Civil Aviation Organization had a membership of 119 nations in June 1970. Australia has continued its position as a member of the Council, which it has held since I.C.A.O. was established in 1947. Further details will be found in Year Book No. 40 and earlier issues.

*International agreements.* Australia had air service agreements in force with twenty-one countries at 31 December 1970. They were Austria, Britain, Canada, Ceylon, France, Federal Republic of Germany, India, Indonesia, Ireland, Italy, Japan, Lebanon, Malaysia, Nauru, Netherlands, New Zealand, Singapore, South Africa, Thailand, United Arab Republic, and the United States of America. Under these agreements Australia is granted rights to operate services between Australia to and through the countries in question; these rights are exercised by Australia's international airline Qantas. In return, the designated airlines of the other countries which are partners to these agreements are granted traffic rights in Australia. Australia also had air service arrangements with sixteen other countries at 31 December 1970. These were Bulgaria, Burma, Republic of Khmer (formerly Cambodia), Republic of China (Taiwan), Greece, Iran, Laos, Mauritius, Mexico, the Philippines, Portugal, Saudi Arabia, Syria, Turkey, the Republic of Vietnam, and Yugoslavia. Qantas also operates services through several of these countries under these arrangements and in other cases overflies the country concerned.

*International air services.* In October 1970 eighteen overseas international airlines were operating regular scheduled services to Australia. These are: Air-India (India), Air Nauru (Nauru), Air New Zealand (New Zealand), Alitalia (Italy), American Airlines (United States of America), British Overseas Airways Corporation (Britain), Canadian Pacific Air Lines (Canada), Cathay Pacific (Britain), Deutsche Lufthansa (Federal Republic of Germany), Fiji Airways (Fiji), Garuda (Indonesia), Japan Air Lines (Japan), K.L.M. Royal Dutch Airlines (Netherlands), Malaysia-Singapore Airlines (Malaysia and Singapore), Pan American World Airways (United States of America), Philippine Air Lines (Philippines), South African Airways (South Africa), and Union de Transports Aeriens (France). Trans-Australia Airlines operates between Darwin and Portuguese Timor under charter to Transportes Aereos de Timor. Qantas Australia's international airline, operates a fleet of twenty-seven aircraft of which twenty-one are Boeing 707-338C jet aircraft. Qantas has also ordered four Boeing 747B superjet aircraft for delivery between August and September 1971. All the shares in Qantas Airways Limited are owned by the Commonwealth Government.

*International operations.* The table following shows particulars of international airline traffic during 1969-70 moving into and out of an area which embraces the Commonwealth of Australia, Papua-New Guinea, and Norfolk Island. These figures do not include traffic between Australia and Papua-New Guinea and Norfolk Island.

**CIVIL AVIATION: INTERNATIONAL AIRLINE TRAFFIC  
TO AND FROM AUSTRALIA(a), 1969-70**

Type of traffic	Aircraft movements	Passengers	Freight	Mail
Traffic to Australia—			short tons	short tons
Qantas Airways Limited . . . . .	3,066	238,056	9,059	797
Other airlines . . . . .	4,214	291,577	9,475	2,203
<i>All airlines . . . . .</i>	<i>7,280</i>	<i>529,633</i>	<i>18,535</i>	<i>2,999</i>
Traffic from Australia—				
Qantas Airways Limited . . . . .	3,017	228,899	5,594	1,086
Other airlines . . . . .	4,208	260,256	5,505	720
<i>All airlines . . . . .</i>	<i>7,225</i>	<i>489,155</i>	<i>11,100</i>	<i>1,806</i>

(a) Australian mainland and adjacent Territories (Papua-New Guinea and Norfolk Island).

Particulars of revenue operations of Australia's regular overseas services are shown in the following table. These operations include all stages of Qantas flights linking Australia with external territories and overseas countries, and stages external to the Commonwealth for flights of other Australian-owned airlines; they exclude flights over stages located within Papua-New Guinea.

**CIVIL AVIATION: OPERATIONS OF AUSTRALIA'S REGULAR OVERSEAS SERVICES  
1965-66 TO 1969-70**

	1965-66	1966-67	1967-68	1968-69	1969-70
Hours flown . . . . . number	68,405	66,840	70,611	74,757	84,684
Miles flown . . . . . '000	29,635	29,201	31,914	33,591	37,537
Passengers—					
Embarkations . . . . . number	448,623	466,849	562,855	642,524	751,315
Passenger-miles . . . . . '000	1,569,513	1,608,868	1,970,008	2,247,241	2,498,180
Freight—					
Tons uplifted . . . . . short tons	11,451	12,259	13,733	18,537	21,165
Ton-miles(a) . . . . . '000	61,836	62,939	67,733	92,488	103,717
Mail—					
Tons uplifted . . . . . short tons	3,252	2,697	3,170	2,862	2,925
Ton-miles(a) . . . . . '000	20,914	16,500	19,209	15,680	15,143

(a) In terms of short tons.

### General aviation

General aviation activity, which covers all non-airline operations such as charter, aerial work and private flying, has grown rapidly throughout Australia in the post-war period so that now it is an important sector of the Australian aviation industry. In 1970, hours flown totalled 1,138,000 compared with 431,000 hours flown by Australian airline aircraft. At 30 June 1970, aircraft employed in general aviation numbered 3,542.

### Aerodromes

The number of aerodromes throughout Australia and its External Territories at 30 June 1970 was 688. One hundred and seventeen were owned by the Commonwealth Government and 571 by local authorities and private interests. Capital expenditure on aerodrome and building construction was \$32.7 million in 1969-70. Maintenance expenditure on Commonwealth-owned aerodromes during 1969-70 was \$2.16 million, and development grants to licensed aerodromes participating in the Local Ownership Plan totalled \$699,000.

### Airways facilities

A total of 365 navigational aids were in service at 30 June 1970. The total includes 214 non-directional beacons (NDB), 95 distance measuring equipment (DME), 21 visual-aural ranges (VAR), 25 VHF Omni-directional ranges (VOR), 15 instrument landing systems (ILS) and 2 twin locator approach systems.

One hundred and twenty-one aerodromes are now equipped with night landing facilities and forty-eight visual approach slope indicators (VASIS) are now operating comprising forty-two Australian designed 'T' systems and six ICAO Red-White systems.

Five long range surveillance radars are in operation.

### Aircraft on the Australian register

CIVIL AVIATION: AIRCRAFT ON AUSTRALIAN REGISTER, 30 JUNE 1970

Type of aircraft	Number of engines				Total aircraft
	One	Two	Three	Four	
Fixed-wing powered aircraft—					
Turbo-jet . . . . .	..	20	10	21	51
Turbo-prop . . . . .	5	74	..	12	91
Piston-engined 20,000 lb and over maximum take-off weight . . . . .	..	56	..	11	67
Piston-engined under 20,000 lb maximum take-off weight . . . . .	2,965	448	5	3	3,421
Helicopters . . . . .	97	2	..	..	99
<i>Total powered aircraft . . . . .</i>	<i>3,067</i>	<i>600</i>	<i>15</i>	<i>47</i>	<i>3,729</i>
Glinters . . . . .	..	..	..	..	264

Particulars of powered aircraft according to manufacturer and air navigation class in which registered, and further details of gliders, may be found in the bulletin *Transport and Communication*, No. 61, 1969-70.

### Civil aviation registrations, licences, etc., in force in Australia

At 30 June 1970 there were 3,729 aircraft registered in Australia (including 264 gliders) and 2,177 registered aircraft owners. There were also, at 30 June 1970, 26,405 pilots' licences in force of which 11,225 were private pilots' licences, 3,599 commercial pilots' licences, and 9,844 student pilots' licences. Flight radio-telephone operators' licences numbered 17,611. The number of aerodromes in Australia at 30 June 1970 totalled 489 of which 104 were government and 385 licensed, i.e. under the control of a municipality, shire, station owner, etc. There were also 10 flying boat bases in operation.



## Accidents and casualties

CIVIL AVIATION: ACCIDENTS INVOLVING CASUALTIES(a)  
AUSTRALIA(b), 1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
Number . . . . .	37	38	36	17	47
Persons killed . . . . .	29	66	47	47	49
Persons seriously injured . . . . .	28	24	29	20	41

(a) Accidents involving civil aircraft which resulted in death or serious injury. Excludes parachutists killed on contact with earth after an uninterrupted fall. (b) Excludes accidents outside Australia involving aircraft on the Australian register.

POSTS; INTERNAL AND OVERSEAS TELECOMMUNICATION SERVICES  
RADIOCOMMUNICATION STATIONS

In this division particulars for the Australian Capital Territory are included with those for New South Wales, and the South Australian figures include particulars for the Northern Territory, unless otherwise indicated. The Central Office of the Postmaster-General's Department is located in Melbourne, Victoria.

## Postmaster-General's Department—General

Under the provisions of the *Post and Telegraph Act* 1901-1968 the Postmaster-General's Department is responsible for the control and operation of postal, telegraphic and telephonic services throughout Australia. The Postmaster-General's Department is also responsible for the provision and operation of the transmitters and technical facilities, other than studio equipment, required for broadcasting and television services by the Australian Broadcasting Commission (*see* pages 372-4), and, in conjunction with the Overseas Telecommunications Commission (*see* pages 370-2), with whom there is close co-operation, provides facilities for communication with overseas countries. Subsidiary to its major activities, the Postmaster-General's Department performs a number of important functions for other Commonwealth and State departments including the collection of broadcast and television licence fees, war service and repatriation repayments, the provision of banking facilities on behalf of the Commonwealth Savings Bank, the sale of tax and duty stamps, the collection of land tax and the over-the-counter distribution of a variety of official forms.

## Research

The Postmaster-General's Department maintains its own research facilities as part of the headquarters organisation in Melbourne. The P.M.G. Research Laboratories had an establishment in 1970 of 423 including 135 professional staff, mainly engineers, physicists, chemists and metallurgists. The main responsibilities of the laboratories are to conduct research and development in telecommunications theory and practice, particularly as applying to the Australian region; to appraise new developments in telecommunication equipment; and to design apparatus and systems required for special applications in the telecommunications and mail handling networks in Australia in cases where these needs could not be met from commercial sources.

## Postal facilities

The following table shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices), and the number of inhabitants to each 100 square miles in each State and in Australia at 30 June 1970.

POSTAL FACILITIES: RELATION TO AREA AND POPULATION, STATES  
30 JUNE 1970

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Post offices—							
Official . . . . .	526	334	230	177	161	52	1,480
Non-official . . . . .	1,759	1,493	943	711	445	322	5,673
<i>Total post offices</i> . . . . .	2,285	1,827	1,173	888	606	374	7,153
Square miles of territory per office	136	48	569	1,014	1,610	71	415
Inhabitants per office . . . . .	1,999	1,885	1,534	1,312	1,617	1,049	1,755
Inhabitants per 100 square miles . . . . .	1,471	3,919	270	129	100	1,488	423

**Employment****PERSONS PROVIDING POST OFFICE SERVICES: CENTRAL OFFICE AND STATES  
30 JUNE 1970**

	<i>Central Office</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>Official full-time staff(a)—</b>								
Permanent officers . . . . .	2,342	25,820	18,346	11,472	8,326	6,001	2,695	75,002
Temporary and exempt employees . . . . .	280	14,360	9,429	3,244	1,849	2,678	678	32,518
<i>Total</i> . . . . .	2,622	40,180	27,775	14,716	10,175	8,679	3,373	107,520
<b>Other(b)—</b>								
Non-official postmasters and postmistresses . . . . .	..	1,806	1,493	963	709	444	329	5,744
Other staff at non-official offices . . . . .	..	495	543	295	205	68	36	1,642
Telephone office-keepers . . . . .	..	152	56	254	83	161	12	718
Mail contractors (including persons employed to drive vehicles) . . . . .	..	1,817	984	1,215	309	305	161	4,791
<i>Total</i> . . . . .	..	4,270	3,076	2,727	1,306	978	538	12,895

(a) Persons directly under the control of the Department. Excludes 3,215 part-time staff. (b) Persons not directly under the control of the Department. Includes persons employed, either full-time or part-time, under contract or in return for payments appropriate to work performed.

**Financial operations—Postmaster-General's Department**

The financial tables which follow allow for the changed accounting arrangements introduced by the Postmaster-General's Department following amendment of the Post and Telegraph Act in 1968.

**Earnings**

The following table shows the earnings of the Postmaster-General's Department as taken from successive Profit and Loss statements.

**POSTMASTER-GENERAL'S DEPARTMENT: EARNINGS, BY SOURCE  
AUSTRALIA, 1960-61 TO 1969-70  
(\$'000)**

<i>Year</i>	<i>Postal service</i>			<i>Telecommunications service</i>					<i>Other earnings (a)</i>	<i>Total</i>
	<i>Postages</i>	<i>Money order and postal order fees</i>	<i>Commission on agency services</i>	<i>Other earnings</i>	<i>Telephone rentals</i>	<i>Telephone calls</i>	<i>Telegrams</i>	<i>Leased telegraph services</i>		
1960-61	85,611	2,348	2,482	2,407	52,341	105,453	9,536	4,057	8,059	272,295
1961-62	87,886	2,366	2,420	1,949	56,008	106,955	9,664	4,283	8,881	280,412
1962-63	91,835	2,501	3,501	2,008	59,913	117,570	9,831	4,844	10,936	302,939
1963-64	97,842	2,638	3,976	2,121	64,422	129,736	10,641	5,172	12,746	329,293
1964-65	103,032	2,722	4,243	2,194	82,175	142,722	11,423	5,847	15,687	370,045
1965-66	107,402	2,771	4,277	2,296	93,856	154,304	11,639	6,144	18,585	401,274
1966-67	110,317	2,919	4,300	2,452	100,823	171,100	11,868	7,018	20,691	431,488
1967-68	127,748	3,178	4,406	2,847	108,293	211,812	14,172	7,478	22,722	502,656
1968-69	142,770	3,400	5,591	3,175	116,974	245,571	14,711	8,145	26,872	567,208
1969-70	149,036	3,505	5,698	3,628	126,669	280,757	15,120	9,253	31,579	625,244

(a) Includes fees for advertisements in telephone directories, proceeds of sales of fixed assets, telephone service connection fees and telex call fees.

**Expenses**

This table shows the operating and maintenance expenses of the Postmaster-General's Department as taken from successive Profit and Loss Statements.

**POSTMASTER-GENERAL'S DEPARTMENT: EXPENSES, BY SOURCE**  
**AUSTRALIA, 1960-61 TO 1969-70**  
 (\$'000)

Year	Postal service			Telecommunications service			Total
	Operating maintenance and general	Carriage of mail	Depreciation, super-annuation, long service leave and interest	Operating and general	Maintenance of plant	Depreciation, super-annuation, long service leave and interest	
1960-61 . . .	59,907	23,669	7,282	53,662	55,457	66,791	266,768
1961-62 . . .	63,594	23,978	7,803	55,437	59,086	74,436	284,335
1962-63 . . .	65,107	25,304	8,384	57,483	55,318	92,868	304,465
1963-64 . . .	69,655	26,682	9,284	62,651	58,290	103,325	329,887
1964-65 . . .	75,987	28,710	10,111	69,637	60,269	121,118	365,833
1965-66 . . .	84,868	31,143	11,077	74,451	66,489	133,370	401,398
1966-67 . . .	95,775	32,395	15,398	83,154	74,063	152,205	452,991
1967-68 . . .	107,016	33,114	18,209	92,614	83,645	177,707	512,305
1968-69 . . .	106,682	35,678	21,277	101,861	95,022	198,651	559,171
1969-70 . . .	123,615	34,911	23,208	116,920	105,711	218,897	623,262

**Profit or Loss**

The following table shows the net results of the Department's operations for the year 1969-70 together with summarised particulars for the year 1968-69.

**POSTMASTER-GENERAL'S DEPARTMENT:**  
**CONSOLIDATED STATEMENT OF PROFIT AND LOSS, AUSTRALIA, 1968-69 AND 1969-70**  
 (\$'000)

	1968-69	1969-70		
	All services	Postal service	Telecommunications service	All services
<b>Earnings . . . . .</b>	567,208	161,866	463,378	625,244
<b>Expenses—</b>				
Operating, maintenance and general . . . . .	339,243	158,526	222,631	381,157
Depreciation . . . . .	103,692	3,793	109,777	113,569
Superannuation . . . . .	20,372	7,755	13,875	21,631
Long service leave . . . . .	7,116	2,874	5,110	7,984
<b>Total expenses . . . . .</b>	470,422	172,948	351,393	524,341
<b>Profit or loss before interest . . . . .</b>	96,786	—11,082	111,985	100,903
<b>Interest . . . . .</b>	88,749	8,786	90,135	98,921
<b>Profit or loss after interest . . . . .</b>	8,037	—19,868	21,850	1,982

Minus sign (—) denotes loss.



## Fixed assets, Postmaster-General's Department

POSTMASTER-GENERAL'S DEPARTMENT: TRANSACTIONS AFFECTING FIXED ASSETS  
1969-70  
(\$'000)

<i>Class of plant</i>	<i>Value at 1 July 1969</i>	<i>Adjustments to values</i>	<i>Additions during year</i>	<i>Instalments of plant written out</i>	<i>Value at 30 June 1970</i>
Telecommunications plant . . . . .	2,157,887	..	290,642	20,192	(a)2,428,337
Postal plant . . . . .	17,568	..	1,419	103	18,884
Engineers' moveable plant . . . . .	44,349	..	6,430	2,887	47,892
Motor vehicles . . . . .	31,556	..	7,143	5,408	33,291
Other plant and equipment . . . . .	41,117	-108	5,030	1,522	44,517
Buildings . . . . .	245,650	..	34,471	..	(b)280,121
Land . . . . .	24,201	..	4,699	123	28,778
<b>Total . . . . .</b>	<b>2,562,329</b>	<b>-108</b>	<b>349,835</b>	<b>30,236</b>	<b>2,881,821</b>

(a) Includes plant under construction valued at \$119,230,625. (b) Includes buildings under construction valued at \$18,631,431.

Minus sign (-) denotes reduction in values of assets.

## Postal services

## Mail delivery points

## MAIL DELIVERY POINTS: STATES, 30 JUNE 1970

<i>State</i>	<i>Postmen's delivery</i>	<i>Roadside delivery</i>	<i>Private boxes</i>	<i>Private mail bag services</i>
New South Wales . . . . .	1,405,395	58,924	89,058	5,876
Victoria . . . . .	932,105	39,425	51,837	5,522
Queensland . . . . .	447,711	41,405	42,166	4,701
South Australia . . . . .	343,309	1,171	31,491	2,840
Western Australia . . . . .	240,858	13,437	24,595	807
Tasmania . . . . .	84,725	2,279	9,605	1,663
<b>Australia . . . . .</b>	<b>3,454,103</b>	<b>156,641</b>	<b>248,752</b>	<b>21,409</b>

## Postal articles handled

The following two tables show the number of postal articles handled by the Australian Post Office, according to their State of origin. Each article is counted once only irrespective of the number of times it may be handled in transit.

## POSTAL ARTICLES HANDLED(a): STATES, 1969-70

('000)

State	News-papers and parcels				News-papers and parcels			
	Letters (b)	packets (c)	Parcels (d)	Registered articles (e)	Letters (b)	packets (c)	Parcels (d)	Registered articles (e)
	Posted for delivery within Australia				Posted for delivery overseas			
New South Wales	758,173	173,283	9,429	3,492	51,592	13,617	408	1,093
Victoria	559,138	94,188	5,652	2,262	32,949	3,878	271	584
Queensland	286,960	34,356	2,761	1,352	12,666	1,040	48	71
South Australia	187,570	17,422	1,540	746	9,408	1,079	64	68
Western Australia	159,151	14,104	1,381	751	9,165	1,009	53	96
Tasmania	56,483	8,314	263	304	482	87	6	4
<b>Australia</b>	<b>2,007,474</b>	<b>341,668</b>	<b>21,027</b>	<b>8,906</b>	<b>116,262</b>	<b>20,710</b>	<b>851</b>	<b>1,916</b>
	Received from overseas				Total postal matter dealt with			
New South Wales	80,262	33,667	820	1,474	890,027	220,567	10,657	6,060
Victoria	44,193	9,982	521	666	636,280	108,048	6,444	3,511
Queensland	8,042	4,890	174	37	307,668	40,286	2,983	1,460
South Australia	7,165	2,255	126	35	204,143	20,756	1,731	849
Western Australia	5,679	3,344	133	67	173,995	18,457	1,567	914
Tasmania	1,859	552	31	4	58,824	8,953	300	312
<b>Australia</b>	<b>147,200</b>	<b>54,690</b>	<b>1,805</b>	<b>2,282</b>	<b>2,270,936</b>	<b>417,068</b>	<b>23,682</b>	<b>13,104</b>

(a) Number of distinct articles handled. (b) Includes letters, cards and other postal articles enclosed in envelopes and sorted with letters. (c) Includes newspapers and postal articles not included in letter mail. (d) Includes registered, cash on delivery and duty parcels. (e) Includes registered articles other than parcels.

## POSTAL ARTICLES HANDLED(a): AUSTRALIA, 1965-66 TO 1969-70

('000)

Year	Newspapers and parcels			Registered articles (e)	Total postal articles handled
	Letters (b)	packets (c)	Parcels (d)		
1965-66	2,123,338	401,578	18,327	12,886	2,556,128
1966-67	2,232,881	417,980	19,196	13,097	2,683,154
1967-68	2,203,089	411,091	20,783	12,908	2,647,871
1968-69	2,181,133	407,922	22,092	12,748	2,623,895
1969-70	2,270,936	417,068	23,682	13,104	2,724,790

(a) Number of distinct articles handled. (b) Includes letters, cards and other postal articles enclosed in envelopes and sorted with letters. (c) Includes newspapers and postal articles not included in letter mail. (d) Includes registered, cash on delivery and duty parcels. (e) Includes registered articles other than parcels.

During 1969-70 the cost of the carriage of mails, as disclosed by the Profit and Loss Account of the Postal Service, was as follows: road, \$12,381,261; railway, \$4,552,770; sea, \$657,779; air—internal, \$4,938,542, overseas, \$12,380,837; total, \$34,911,189.

## Money orders and postal orders

The issue of money orders and postal orders is regulated by sections 74-9 of the *Post and Telegraph Act* 1901-1968. The maximum amount for which a single money order payable within Australia may be obtained is \$80, but additional orders will be issued upon request when larger amounts are to be remitted. The maximum amount permitted to be sent by any one person to a person or persons outside Australia is \$50 a week. A postal order is not available for a sum larger than eight dollars. The following table shows the number and value of money orders and postal orders issued in Australia in each of the years 1965-66 to 1969-70 and the income therefrom which has accrued to the Post Office.

**MONEY ORDERS AND POSTAL ORDERS(a): TRANSACTIONS, AUSTRALIA  
1965-66 TO 1969-70**

Year	Money orders(b)			Postal orders(a)		
	Issued		Total commission received	Issued		Fee
	Number	Value		Number	Value	
	'000	\$'000	\$'000	'000	\$'000	\$'000
1965-66 . .	(c)12,634	407,275	2,200	15,010	16,184	604
1966-67 . .	(c)12,594	434,942	2,332	13,499	18,454	629
1967-68 . .	(c)11,373	438,668	2,544	(d)12,364	22,149	657
1968-69 . .	9,672	209,868	2,637	13,525	27,262	772
1969-70 . .	9,153	175,447	2,640	14,866	31,431	861

(a) Postal orders replaced postal notes on 1 June 1966. (b) Money orders issued for payment in Australia and overseas. (c) Includes official money orders used in bringing to account telephone accounts and collections on War Service Homes repayments. (d) Postal orders for \$5, \$6, \$7 and \$8 were introduced in October 1967. Until then the highest denomination was \$4.

Of the total money orders issued in Australia during 1969-70, 8,681,502 valued at \$171,143,264 were payable in Australia, and 471,720 valued at \$4,303,107 were payable overseas. Of the total money orders paid in Australia during 1969-70, 8,730,876 (\$170,792,860) were issued in Australia, and 205,577 (\$3,865,491) were issued overseas.

Of the total postal orders paid in Australia during 1969-70 (14,809,880 valued at \$30,971,774), 10,908,306 (\$23,983,414) were paid in the State in which issued, and 3,901,574 (\$6,988,360) were paid in States other than those in which issued.

### Internal telecommunication services

A review of the development of telegraph services in Australia up to 1921 appeared in Year Book No. 15, page 625, and subsequent developments of importance have been dealt with in later issues. Internal telecommunication operations now comprise telephone, telegraph, and telegraph exchange (telex) services.

#### Wire and pole mileages

At 30 June 1970 there were 22,804,493 single wire miles of cable and 1,084,904 miles of aerial wire used for telecommunication purposes in Australia. The aerial wires are mounted on 104,494 miles of pole routes.

#### Coaxial cable and broadband relay systems

In recent years trunk telephone, telegraph and television channels have been increasingly provided by coaxial cable and radio relay systems. Broadband radio relay systems and coaxial cables are an alternative means of providing transmission facilities, each radio bearer being similar in carrying capacity to a coaxial tube. At 30 June 1970 there were 14,119 tube miles of coaxial cable and 39,897 bearer miles of radio relays in operation.

#### Telephone services in operation

Increasing use of the telephone by the community has resulted in a demand for additional telephone services. The volume of internal telephone traffic has consistently expanded, trunk line calls having the fastest rate of growth.

The following table shows the number of services in operation in each State at 30 June 1970 classified according to type of service, type of exchange to which connected, and location. Telephone services connected to exchanges located within fifteen miles of the Sydney and Melbourne and ten miles of the Brisbane, Adelaide, Perth, and Hobart General Post Offices are defined as being within a metropolitan area.



## TELEPHONE SERVICES IN OPERATION: STATES, 30 JUNE 1970

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Type of service—							
Ordinary exchange services . . .	925,495	739,501	291,174	211,906	161,028	68,362	2,397,466
Duplex services . . .	976	22	2	208	108	1,316	
Party line services . . .	4,240	1,689	2,854	1,249	1,128	152	11,312
Private branch exchange services . . .	108,202	75,532	29,954	23,350	21,317	4,988	263,343
Public telephones . . .	11,564	7,505	4,768	2,945	2,375	1,074	30,231
Connected to—							
Automatic exchanges . . .	955,012	762,872	275,272	213,565	169,347	66,432	2,442,500
Manual exchanges . . .	95,465	61,355	53,500	25,887	16,709	8,252	261,168
Located in—							
Metropolitan areas . . .	653,290	544,844	157,184	153,967	127,199	27,365	1,663,849
Country areas . . .	397,187	279,383	171,588	85,485	58,857	47,319	1,039,819
Total . . .	1,050,477	824,227	328,772	239,452	186,056	74,684	2,703,668

## TELEPHONE SERVICES IN OPERATION: AUSTRALIA, 1966 TO 1970

	30 June—				
<i>Services connected to—</i>	1966	1967	1968	1969	1970
Metropolitan exchanges—					
Automatic . . .	1,316,456	1,383,475	1,456,179	1,548,479	1,663,849
Country exchanges—					
Automatic . . .	467,844	523,697	594,977	681,668	778,651
Manual . . .	336,078	327,531	307,681	281,084	261,168
All exchanges—					
Automatic . . .	1,784,300	1,907,172	2,051,156	2,230,147	2,442,500
Manual . . .	336,078	327,531	307,681	281,084	261,168
Total services . . .	2,120,378	2,234,703	2,358,837	2,511,231	2,703,668

## Telephone instruments

## TELEPHONE INSTRUMENTS IN SERVICE: STATES, 1966 TO 1970

('000)

30 June—	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
1966 . . .	1,182	905	357	272	176	86	2,978
1967 . . .	1,276	958	377	287	191	89	3,178
1968 . . .	1,371	1,020	398	302	208	93	3,392
1969 . . .	1,444	1,080	423	321	232	98	3,599
1970 . . .	1,575	1,182	452	344	256	104	3,913
Number at 30 June 1970 per 100 population . . .	33.5	34.3	25.1	27.8	26.2	26.5	31.2

## Internal telephone traffic

LOCAL AND TRUNK LINE TELEPHONE CALLS: AUSTRALIA  
1965-66 TO 1969-70

Year	Effective paid local calls		Trunk line calls		Total calls '000
	Total '000	Per service number	Total '000	Per service number	
1965-66	2,081,000	1,008	116,600	56	2,197,600
1966-67	2,179,000	1,001	134,200	62	2,313,200
1967-68	2,295,000	999	151,600	66	2,446,600
1968-69	2,442,000	1,004	172,200	71	2,614,200
1969-70	2,662,000	1,021	198,400	76	2,860,400

Subscriber trunk dialling (S.T.D.) facilities were introduced during the year 1961-62 from Canberra to the Sydney network and from Warragul (Victoria) to Melbourne. At the end of June 1970 subscriber trunk dialling was in operation at 943 exchanges, connected to approximately 1,992,525 services.

## Internal telegraph traffic

Telegrams can be lodged at any post office, telephone office or from any public telephone equipped for multi-coin operation. In addition, telegrams can be despatched from any subscriber's telephone or telegraph exchange (telex) equipment. The number of telegrams of various types transmitted within the Commonwealth during the years 1965-66 to 1969-70 is set out below.

INTERNAL TELEGRAPH TRAFFIC: AUSTRALIA, 1965-66 TO 1969-70  
(<sup>'000</sup>)

Year	Ordinary (a)	Urgent	Press	Letter- grams	Meteoro- logical service	Service	Total telegrams
1965-66	18,605	550	100	59	1,005	717	21,036
1966-67	19,019	494	78	47	1,014	719	21,372
1967-68	18,723	440	68	38	1,060	719	21,047
1968-69	18,543	440	68	33	1,068	718	20,869
1969-70	18,171	453	63	32	1,037	752	20,508

(a) Includes radiograms.

## Teleprinter exchange service (telex)

Particulars of the operations of the teleprinter exchange network, which are additional to the telegraph traffic shown above, are as follows:

TELEPRINTER EXCHANGE NETWORK (TELEX)  
SERVICES AND INTERNAL CALLS, AUSTRALIA  
1964-65 TO 1969-70

Year	Services at end of year	Internal calls during year
1964-65	2,179	1,867,701
1965-66	2,444	2,161,353
1966-67	3,154	3,592,610
1967-68	4,054	5,435,413
1968-69	5,067	7,362,084
1969-70	6,430	9,273,921

### Overseas telecommunication services

The Overseas Telecommunications Commission (Australia) is the authority responsible for the establishment, maintenance and operation of telecommunication services between Australia and other countries, with ships at sea and to and between Australia's external Territories.

The Commission was established under the *Overseas Telecommunications Act* 1946. This Act implemented, in Australia, a recommendation of the 1945 Commonwealth Telecommunications Conference for national ownership of the external telecommunications services of the British Commonwealth countries concerned. (Details of overseas communication systems operating in Australia prior to 1946 and developments leading to the establishment of the Commission were published in Year Book No. 37, pages 220-4.)

At the 1966 Commonwealth Telecommunications Conference the British Commonwealth countries completed a review of the machinery for their collaborative arrangements in telecommunications. Following adoption of the recommendations of the 1966 Conference by the representative Governments the Commonwealth Telegraphs Agreements of 1948 and 1963, under which the earlier collaborative financial arrangements had been established, were formally terminated on 31 March 1969. The new Commonwealth Telecommunications Organisation became fully operative from 1 April 1969 when the Commonwealth Telecommunications Organisation Financial Agreement entered into force.

The Commonwealth Telecommunications Organisation, the purpose of which is to promote the efficient exploitation and development of the Commonwealth external telecommunications system, is a three-tier structure comprising the Commonwealth Conference on Telecommunications, the Commonwealth Telecommunications Council and the Commonwealth Telecommunications Bureau. The Commonwealth Telecommunications Council is the continuing management body of the Organisation with the role of promoting the purpose of the Organisation and carrying out the policies agreed by Governments. The Commonwealth Telecommunications Bureau is the Secretariat for the Organisation and functions under the control and direction of the Council.

In association with the Post Office within Australia and with communication carriers in other Commonwealth and foreign countries the Commission provides public message telegram, telephone, telex, phototelegram and leased circuit services to most countries and places throughout the world. International television programmes are provided by means of satellite communications facilities with countries operating earth stations, while, as at September 1970, a switched data service was available to the United Kingdom.

To meet Australia's increasing demand for overseas communication channels, and because of limitations to performance and capacity inherent in telegraph cables and high frequency radio systems, the Commission, in partnership with the overseas telecommunications authorities of Britain, Canada and New Zealand, installed a large capacity telephone cable across the Pacific Ocean, connecting Australia, New Zealand and Canada via Suva and Honolulu. The cable (COMPAC) was opened in December 1963 and forms part of a British Commonwealth large capacity cable scheme, in which a complementary cable between Britain and Canada (CANTAT) was officially opened in December 1961. The two cable connections are linked across Canada by a microwave system. The Commonwealth cable system feeds into the United States of America network at Hawaii and into the European network at London.

The south-east Asia cable project (SEACOM), extending the large capacity telephone cable system from Sydney to Singapore and Kuala Lumpur via Cairns, Madang, Guam, Hong Kong, and Kota Kinabalu, was opened for service on 30 March 1967.

The Commonwealth Cable Management Committee, comprising representatives of Britain, Canada, Australia, New Zealand, Malaysia and Singapore, administers COMPAC and SEACOM.

In 1964 a number of countries, including Australia, agreed to establish a global commercial communications satellite system at an estimated cost, for the space segment, of \$US200m. Broadly the term 'space segment' describes the orbiting satellites and the tracking, control, command, and related facilities required to support their operation. Australia, represented by the Commission, is one of the eighteen representatives on the Interim Communications Satellite Committee (ICSC) which is the management body of the seventy-six nation International Telecommunications Satellite Consortium (INTELSAT).

In December 1968, the Interim Communications Satellite Committee completed its report to INTELSAT member Governments on permanent arrangements to supersede those which had been provided for in the 1964 Interim Agreement. As prescribed in that Agreement, an intergovernmental Conference, to consider the Committee's report and to define the permanent arrangements for the International Telecommunications Satellite Consortium (INTELSAT), was held in Washington



during February/March 1969. The Conference did not reach agreement on the new arrangements and resumed in Washington in February 1970. The resumed Conference did not reach agreement on the permanent arrangements and will meet again early in 1971.

In March 1968 a satellite earth station at Moree, New South Wales, owned and operated by the Commission, commenced commercial communications, including a capability for television transmissions/receptions, through an INTELSAT II satellite launched in January 1967 and positioned in stationary orbit 22,300 miles above the equator. This station was the first in Australia constructed as a 'standard' station of the INTELSAT network and carries direct circuits between Australia and other countries in the Pacific Region. Since 15 February 1969 these services have been provided through a Pacific Ocean INTELSAT III satellite. The link with Japan, the first by satellite from Australia to an Asian country, was established for commercial operation on 14 March 1969.

The completion of the new standard earth stations at Carnarvon (Western Australia) and Ceduna (South Australia) in 1969 and a significant expansion of facilities at the earth station at Moree (N.S.W.) provided increased telecommunication services via satellite.

The original non-standard station in Carnarvon (opened in 1967) is now used solely for telemetry, tracking and command (T.T. & C.) functions under contract with the INTELSAT organisation. The T.T. & C. function provides for four such stations to be spaced around the world so that any INTELSAT satellite can be viewed and controlled no matter where it may be. These stations keep a continuous check of the position of each satellite and its functioning by means of signals transmitted by the satellite. When required, signals are transmitted to a satellite to control the direction of its antenna and to change its orbital position. During launches, these stations transmit the commands which fire the satellite motor to place it in final orbit. The Interim Communications Satellite Committee selected the Carnarvon station for this purpose after calling competitive tenders from earth station owners in the coverage zone of the Indian Ocean and Pacific Ocean satellites.

The second Carnarvon station, operating via the Pacific Ocean INTELSAT III satellite, provides a link for the National Aeronautics and Space Administration (NASA) between its Carnarvon space tracking station and the United States. The earth station at Ceduna, operated through the Indian Ocean INTELSAT III satellite, offers services to earth stations in the United Kingdom and Indonesia. Services between Ceduna and other countries in the eastern hemisphere will be established as additional earth stations are brought into operation in this area.

#### International telecommunication traffic

Particulars of the volume of international telegraph services, originating and terminating in Australia, during the years ended 31 March 1969 and 1970 are shown in the following table.

INTERNATIONAL TELEGRAPH SERVICES: AUSTRALIA  
YEARS ENDED 31 MARCH 1969 AND 1970  
(<sup>'000 words</sup>)

Class of traffic	Words transmitted—					
	From Australia		To Australia		Total	
	1968-69	1969-70	1968-69	1969-70	1968-69	1969-70
Letter . . .	28,367	30,137	24,537	26,492	52,905	56,629
Ordinary . . .	24,718	27,433	23,927	25,541	48,645	52,973
Press . . .	4,411	3,149	2,867	3,630	7,278	6,779
Greetings . . .	1,454	1,749	1,940	1,884	3,393	3,632
Urgent . . .	1,506	1,718	1,364	1,399	2,870	3,117
Other . . .	925	729	2,674	2,153	3,599	2,882
Total . . .	61,381	64,914	57,308	61,099	118,690	126,013

The following table shows particulars of overseas telecommunication traffic other than telegraphic between Australia and overseas countries for the years ended 31 March 1969 and 1970.

**INTERNATIONAL TELECOMMUNICATION TRAFFIC OTHER THAN TELEGRAPHIC  
AUSTRALIA, YEARS ENDED 31 MARCH 1969 AND 1970**

Service	Transmissions					
	From Australia		To Australia		Total	
	1968-69	1969-70	1968-69	1969-70	1968-69	1969-70
Telephone. . . . . paid minutes	3,316,074	4,310,962	3,883,813	4,900,644	7,199,887	9,211,606
Telex . . . . . paid minutes	1,757,719	2,476,404	1,725,280	2,371,303	3,482,999	4,847,707
Phototelegrams . . . . pictures	1,477	1,260	5,819	4,521	7,296	5,781

#### Coastal stations

The Overseas Telecommunications Commission operates fourteen coastal radio stations at points around the Australian coast, three on the Papua-New Guinea coast and one at Norfolk Island. The station at Cairns (Queensland) is operated by the Department of Civil Aviation as agent for the Commission. During the year ended 31 March 1970 the coastal radio service handled 5,909,087 paid words to ships and 3,748,824 words from ships. Ship calls over the radiotelephone service extended over 95,545 paid minutes.

#### Radiocommunication stations authorised

At 30 June 1970 there were 135,868 civil radiocommunication stations authorised for operation in the Commonwealth and its Territories. Of these, 5,601 were stations established at fixed locations, 10,845 were land stations which were established at fixed locations for communication with mobile stations, 113,084 were mobile stations and 6,338 amateur stations. Particulars of broadcasting stations and broadcast listeners' licences are shown on pages 373 and 375 respectively.

### BROADCASTING AND TELEVISION

Broadcasting and television services in Australia operate under the *Broadcasting and Television Act* 1942-1969 and comprise the National Broadcasting Service, the National Television Service, the Commercial Broadcasting Service, and the Commercial Television Service. General control of these services is a function of the Australian Broadcasting Control Board. Licence fees for commercial broadcasting and television stations are payable under the *Broadcasting Stations Licence Fees Act* 1964-1966 and the *Television Stations Licence Fees Act* 1964-1966 respectively.

Particulars of the composition, functions and responsibilities of the Australian Broadcasting Control Board are shown in Year Book No. 51, pages 594-5. The functions of the Board as shown therein were subsequently amended by repealing the Board's power to regulate the establishment and operation of networks. Pursuant to the *Broadcasting and Television Act* 1942-1969, the Australian Broadcasting Commission now consists of nine members, one of whom shall be a woman.

#### Broadcasting services

##### The National Broadcasting Service

In sound broadcasting the programmes of the National Broadcasting Service are provided by the Australian Broadcasting Commission through transmitters operated by the Postmaster-General's Department.

*Technical facilities.* At 30 June 1970 the National Broadcasting Service comprised seventy-eight transmitting stations, of which seventy-two were medium frequency and six high frequency.

The medium-frequency transmitters operate in the broadcast band 525 to 1,605 kilocycles a second. The high-frequency stations, using frequencies within the band three to thirty megacycles a second, provide services to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, the Northern Territory, and northern and central Queensland.

Many of the programmes provided by country stations are relayed from the capital cities, high-quality programme transmission lines being used for the purpose. A number of programme channels are utilised to link national broadcasting stations in the capital cities of Australia, and, when necessary, this system is extended to connect both the national and commercial broadcasting stations.

At 30 June 1970 sixty of the Australian medium-frequency stations were situated outside the six State capital cities.

*Programme facilities.* The programmes of the Australian Broadcasting Commission cover a wide range of activities. The proportion of broadcasting time allocated to the various types of programme during 1969-70 was as follows: classical music, 25.0 per cent; entertainment, 29.9 per cent; news, 9.2 per cent; sporting, 4.7 per cent; light music, 2.3 per cent; spoken word, 7.5 per cent; drama and features, 4.1 per cent; education, 3.4 per cent; Parliament, 3.4 per cent; religious, 2.9 per cent; children's programmes, 1.9 per cent; rural, 2.4 per cent; and presentation, 3.3 per cent. Further particulars of the operations of the Australian Broadcasting Commission in respect of music, drama and features, youth education, talks, rural broadcasts, news, and other activities are shown in Year Book No. 51, pages 596-7.

### The Commercial Broadcasting Service

Commercial broadcasting stations are operated under licences granted and renewed by the Postmaster-General after taking into consideration any recommendations which have been made by the Broadcasting Control Board. The initial period of a licence is five years and renewals are granted for a period of one year. The fee payable for a licence is \$50 on the grant of the licence, and thereafter \$50 a year plus an amount ascertained by applying the following rates to 'gross earnings', within the meaning of the *Broadcasting Stations Licence Fees Act 1964-1966*, during the preceding financial year—1 per cent up to \$1,000,000; 2 per cent \$1,000,001 to \$2,000,000; 3 per cent \$2,000,001 to \$4,000,000; and 4 per cent over \$4,000,000.

### Overseas Broadcasting Service

There are seven high-frequency stations at Shepparton and two at Lyndhurst, Victoria, and three repeater stations at Darwin, Northern Territory, which provide the overseas service known as 'Radio Australia'. As in the case of the National Broadcasting Service, these stations are maintained and operated by the Postmaster-General's Department, and their programmes are arranged by the A.B.C. The programmes, which give news and information about Australia presented objectively, as well as entertainment, are directed mainly to south east Asia and the Pacific. The overseas audience has grown very substantially in recent years, as evidenced by a large and increasing number of letters from listeners abroad.

### Broadcasting stations

BROADCASTING STATIONS: STATES AND TERRITORIES, 30 JUNE 1970

Type of station	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
National—									
Medium frequency .	19	5	16	8	14	4	4	2	72
High frequency .	1	2	2	..	1	..	..	..	6
Overseas (high frequency) .	..	9	..	..	..	..	3	..	12
Commercial (medium frequency) .	37	20	25	8	14	8	1	1	114
Total .	57	36	43	16	29	12	8	3	204

Tables showing the call sign, location, frequency, and aerial power of national and commercial broadcasting stations in operation at 30 June 1970 are shown in *Transport and Communication*, Bulletin No. 61.



## Television services

### The National Television Service

The National Television Service is provided by the Australian Broadcasting Commission through transmitters operated by the Postmaster-General's Department. The first national station (ABN Sydney) commenced regular transmission on 5 November 1956. At 30 June 1970 forty-one stations were operating, excluding thirty-three translator stations. Three additional national television stations and twenty-seven low powered stations (in remote localities) had been authorised but had not commenced to operate by that date.

The television programmes provided by the Australian Broadcasting Commission cover a wide range of activities. The proportion of television time allocated among the A.B.C.'s various departments to 30 June 1970 was as follows: drama, 28.6 per cent; public interest, 15.9 per cent; sporting, 9.3 per cent; news, 6.5 per cent; variety and acts, 7.2 per cent; education, 18.3 per cent; musical performances, 0.9 per cent; religious, 1.4 per cent; rural, 1.0 per cent; special arts and aesthetics, 6.0 per cent; presentation, 4.9 per cent. Further particulars of the operation of the National Television Service in respect of talks, drama and features, music, rural services, education, news and other activities are shown in Year Book No. 51 pages 598-9. The average weekly transmission time for the forty-one national television transmitters was eighty-one hours during the year ended 30 June 1970.

### The Commercial Television Service

Commercial television stations are operated under licences granted and renewed by the Postmaster-General. The first commercial station (TCN Sydney) commenced regular transmission on 16 September 1956. At 30 June 1970 forty-five television stations were operating.

The initial grant of a licence is for a period of five years and thereafter the licence is renewable annually. The fee payable is \$200 for the first year and thereafter \$200 a year plus an amount ascertained by applying the following rates to 'gross earnings', within the meaning of the *Television Stations Licence Fees Act 1964-1966*, during the preceding financial year—1 per cent up to \$1,000,000; 2 per cent \$1,000,001 to \$2,000,000; 3 per cent \$2,000,001 to \$4,000,000; and 4 per cent over \$4,000,000.

### Television stations

During the year ended 30 June 1970 two new national television stations commenced regular transmissions in Western Australia, ABGW Channel 6, Geraldton; and ABKW Channel 6, Kalgoorlie. No new commercial television stations commenced regular transmissions during the year. The following table shows the number of television stations in operation at 30 June 1970.

TELEVISION STATIONS: STATES AND AUSTRALIAN CAPITAL TERRITORY  
30 JUNE 1970

Type of station and location	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Total
National—								
Metropolitan . . .	1	1	1	1	1	1	1	7
Country . . . . .	12	7	7	2	5	1	..	34
<i>Total, National</i> . .	13	8	8	3	6	2	1	41
Commercial—								
Metropolitan . . .	3	3	3	3	2	1	1	16
Country . . . . .	11	6	7	2	2	1	..	29
<i>Total, Commercial</i> .	14	9	10	5	4	2	1	45
<i>All stations</i> . . . .	27	17	18	8	10	4	2	86

Tables showing the call sign, location, frequencies, polarisation, aerial power, and weekly hours of transmission of National and Commercial television stations in operation at 30 June 1970 are shown in *Transport and Communication*, Bulletin No. 61.

### Broadcast listeners' and television viewers' licences

Broadcast listeners', television viewers', and combined receiving licences are issued at post offices in accordance with the provisions of the *Broadcasting and Television Act 1942-1969*, which stipulates that, except as prescribed, a person shall not use, maintain or have in his possession a broadcast or television receiver unless there is in force a licence which applies to that receiver. A broadcast listener's licence or a television viewer's licence, whichever is appropriate, authorises the operation of any broadcast receiver or any television receiver, which is: (a) in the possession of the holder of a licence, or of a member of his family, at the address specified in the licence and is ordinarily kept at that address; (b) installed in a vehicle which is ordinarily in the possession of the holder, or a member of his family, and is ordinarily kept at that address when not in use. A person who has both broadcast and television receivers at the one address may take out a combined receiving licence, provision for which was introduced by legislation effective from 1 April 1965.

A licence may be granted free of charge to a blind person over 16 years of age or to a person or authority conducting a school, and at a concession rate to certain classes of pensioners. Receivers provided for the use of inmates of an approved institution (including a hospital) are covered by an appropriate licence held by the institution. Persons residing in Zone 2 may also be granted a broadcast listener's licence at a reduced rate. Zone 1 is the area within 250 miles of specified broadcasting stations and Zone 2 is the remainder of Australia.

Each broadcast or television receiver let out on hire (except under a hire purchase agreement) must be covered by a hirer's licence held by the person or firm from whom the receiver is hired. The keeper of a lodging house (which includes a hotel, motel, boarding house, or any other premises where lodging or sleeping accommodation is provided for reward) must take out a lodging house licence for each broadcast or television receiver provided by the proprietor in any room or part of the lodging house occupied or available for occupation by lodgers.

The fees payable for the various classes of licence at 30 June 1970 were as follows:

#### BROADCAST LISTENERS' AND TELEVISION VIEWERS' LICENCES RATES

Licence		Ordinary rate	Pensioner rate
		\$	\$
Broadcast listener's licence and hirer's licence for a broadcast receiver . . . . .	Zone 1	6.50	1.00
	Zone 2	3.30	0.70
Lodging house licence for a broadcast receiver . . . . .	Zone 1	6.50	..
	Zone 2	3.30	..
Television viewer's licence and hirer's licence for a television receiver . . . . .		14.00	3.00
		14.00	..
Lodging house licence for a television receiver . . . . .		14.00	..
Combined receiving licence . . . . .		20.00	4.00

#### Numbers of broadcast listeners' and television viewers' licences

##### BROADCAST LISTENERS' LICENCES IN FORCE(a): STATES, 1966 TO 1970

30 June—	N.S.W.(b)	Vic.	Qld	S.A.(c)	W.A.	Tas.	Aust.
1966 . . .	929,119	716,594	340,687	281,747	169,709	88,095	2,525,951
1967 . . .	950,788	712,813	340,477	278,069	173,571	82,322	2,538,040
1968 . . .	934,877	724,711	371,637	290,051	181,356	77,228	2,579,860
1969 . . .	952,634	728,647	382,869	297,877	189,633	78,552	2,630,212
1970 . . .	960,223	747,508	384,951	302,519	196,679	78,513	2,670,393

(a) Includes short-term hirers' licences and combined broadcast listeners' and television viewers' licences. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

## TELEVISION VIEWERS' LICENCES IN FORCE(a): STATES, 1966 TO 1970

30 June—	N.S.W.(b)	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1966 . . .	843,103	662,595	277,182	233,726	142,881	66,187	2,225,674
1967 . . .	927,038	690,857	302,575	254,504	159,048	71,113	2,405,135
1968 . . .	948,153	726,518	335,913	268,595	165,632	74,581	2,519,392
1969 . . .	993,145	747,080	367,289	280,420	183,307	78,216	2,649,457
1970 . . .	1,031,739	782,819	372,609	292,359	197,692	80,756	2,757,974

(a) Includes short-term hirers' licences and combined broadcast listeners' and television viewers' licences. (b) Includes Australian Capital Territory.

The numbers of combined receiving licences included in both of the foregoing tables as at 30 June 1970 are: New South Wales, 836,320; Victoria, 675,457; Queensland, 302,744; South Australia, 232,921; Western Australia, 158,979; Tasmania, 68,439; Australia, 2,274,860.

Short-term hirers' licences (included above) at 30 June 1970 were: New South Wales, 100,708; Victoria, 32,480; Queensland, 30,563; South Australia, 42,068; Western Australia, 23,116; Tasmania, 4,939; Australia, 233,874.

## Revenue received from broadcast and television licence fees

The following table shows the revenue received from broadcast listeners' licence fees, television viewers' licence fees and from fees for combined licences during the years 1965-66 to 1969-70.

REVENUE RECEIVED FROM BROADCAST AND TELEVISION LICENCE FEES  
STATES, 1965-66 TO 1969-70  
(\$'000)

Year	N.S.W.(a)	Vic.	Qld	S.A.(b)	W.A.	Tas.	Aust.
1965-66 . . .	13,401	10,335	4,545	3,832	2,285	1,047	35,445
1966-67 . . .	14,244	10,840	4,951	4,101	2,571	1,127	37,835
1967-68 . . .	14,554	11,265	5,321	4,219	2,666	1,157	39,182
1968-69 . . .	16,700	12,747	6,306	4,930	3,127	1,314	45,125
1969-70 . . .	17,782	13,795	6,694	5,238	3,483	1,397	48,389

(a) Includes Australian Capital Territory. (b) Includes Northern Territory in respect of broadcast licence fees.

## TRAVEL

An article outlining the history and growth of travel and the structure of tourist organisations in Australia, prepared by the Australian National Travel Association, appeared in Year Book No. 52, pages 1158-84. The following pages contain statistics of travel to and from Australia, together with some descriptive matter. Current statistics on overseas travel are published in monthly and quarterly mimeographed statements *Overseas Arrivals and Departures*.

## Overseas travel

Statistics about travellers to and from Australia are classified in the first instance by the actual or intended length of stay in Australia or in a country abroad; this classification distinguishes between permanent and temporary movement.

Statistics of permanent arrivals (immigrants) and permanent departures (emigrants) are analysed in Chapter 7—Population.

## Traveller statistics (overseas visitors and Australian residents)

Statistics of temporary arrivals and departures which are in the nature of travel statistics are included in this chapter. They comprise two main categories.

- (i) *Short term.* Those who intend to stay or have stayed in Australia (overseas visitors) or in a country overseas (Australian residents) for less than a year.
- (ii) *Long term.* Those who intend to stay or have stayed in Australia (overseas visitors) or in a country overseas (Australian residents) for a year or more, but not permanently.



*Short-term* movement includes Australian troops, regardless of their length of stay abroad, and Australian residents who may be away for more than a year but whose actual or intended stay in any one country is less than a year. It excludes persons who arrive in and depart from Australia on the same ship's voyage or on the same flight (variously called direct transit or 'through' passengers), passengers on short pleasure cruises in the South-West Pacific commencing and finishing in Australia, and all crew. However, it includes persons who, on arrival, declare the purpose of their visit to Australia to be 'in transit', if a change of ship or flight takes place. Short-term visitors are more numerous than long-term visitors, and have come to be regarded as 'tourists' by many users of the statistics.

United States troops commenced coming to Australia on rest and recreation leave in October 1967. For statistical purposes they are classified as short-term visitors travelling by air for holiday purposes and their country of residence and country of embarkation or disembarkation are shown as 'Asia—other'. During the period October 1967 to December 1970, 233,152 United States troops arrived in Australia on rest and recreation leave.

**TRAVELLER STATISTICS—SUMMARY, AUSTRALIA  
1966 TO 1970**

Year	Overseas Visitors				Australian Residents			
	Short-term		Long-term		Short-term		Long term	
	Arriving in Australia	Departing from Australia	Arriving in Australia	Departing from Australia	Departing from Australia	Returning to Australia	Departing from Australia	Returning to Australia
1966	187,262	194,876	19,234	11,999	183,161	181,770	54,321	28,292
1967	221,821	231,762	21,637	12,801	217,746	223,038	52,148	35,655
1968	299,889	311,181	23,473	12,617	251,880	252,773	51,386	36,387
1969	361,277	372,747	26,867	15,602	288,805	288,990	59,027	38,308
1970	416,128	431,039	31,194	18,727	352,526	351,929	64,215	42,099

In addition to the basic classification of travellers shown above, certain other characteristics are also ascertained. These characteristics are as follows:

- (i) For all travellers: sex, age, marital status, nationality, country of birth, occupation, intended and actual length of stay, purpose of journey and mode of transport.
- (ii) For arrivals: country of last residence, country of embarkation, State of intended residence and State of disembarkation.
- (iii) For departures: country of intended residence, country of disembarkation, State of residence in Australia and State of embarkation.

The categories of travellers shown in the previous table are cross-classified by the characteristics listed above and the resulting statistics are shown in considerable detail in the quarterly bulletin *Overseas Arrivals and Departures* and in the annual bulletin *Demography*. Certain unpublished information is available on request. Selected traveller statistics are shown in the following tables.

**OVERSEAS VISITORS ARRIVING AND AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY  
BY MARITAL STATUS, AGE AND SEX: AUSTRALIA, 1970**

Characteristics	Short-term			Long-term		
	Males	Females	Persons	Males	Females	Persons
<b>OVERSEAS VISITORS ARRIVING</b>						
Marital status						
Never married . . . . .	122,585	46,609	169,194	11,912	7,627	19,539
Married . . . . .	145,242	76,855	222,097	5,931	4,402	10,333
Widowed or divorced . . . . .	7,355	17,482	24,837	423	899	1,322
Age (years)						
0-14 . . . . .	14,760	13,938	28,698	2,361	2,182	4,543
15-24 . . . . .	82,996	22,041	105,037	8,403	5,579	13,982
25-44 . . . . .	101,718	40,484	142,202	5,891	3,238	9,129
45-64 . . . . .	61,315	47,558	108,873	1,311	1,352	2,663
65 and over . . . . .	14,393	16,925	31,318	300	577	877
<b>Total</b> . . . . .	<b>275,182</b>	<b>140,946</b>	<b>416,128</b>	<b>18,266</b>	<b>12,928</b>	<b>31,194</b>

**OVERSEAS VISITORS ARRIVING AND AUSTRALIAN RESIDENTS DEPARTING  
TEMPORARILY BY MARITAL STATUS, AGE AND SEX: AUSTRALIA, 1970—continued**

<i>Characteristics</i>	<i>Short-term</i>			<i>Long-term</i>		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
<b>AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY</b>						
<i>Marital status</i>						
Never married . . . . .	66,493	53,074	119,567	18,923	17,418	36,341
Married . . . . .	127,998	82,869	210,867	13,388	12,589	25,977
Widowed or divorced . . . . .	5,758	16,334	22,092	617	1,280	1,897
<i>Age (years)</i>						
0-14 . . . . .	16,480	16,108	32,588	6,867	6,727	13,594
15-24 . . . . .	34,760	29,568	64,328	7,968	11,108	19,076
25-44 . . . . .	80,632	43,654	124,286	14,447	9,992	24,439
45-64 . . . . .	56,979	49,657	106,636	3,019	2,686	5,705
65 and over . . . . .	11,398	13,290	24,688	627	774	1,401
<b>Total . . . . .</b>	<b>200,249</b>	<b>152,277</b>	<b>352,526</b>	<b>32,928</b>	<b>31,287</b>	<b>64,215</b>

The following tables show country of residence of visitors arriving (i.e. in which they last stayed for one year or more); and country of disembarkation of Australian residents departing. No information is available as to the country in which Australian residents going abroad in the short-term classification intend to spend most time.

**OVERSEAS VISITORS ARRIVING, BY COUNTRY OF RESIDENCE(a)  
AND MODE OF TRANSPORT: AUSTRALIA, 1970**

<i>Country of residence(a)</i>	<i>Short-term</i>			<i>Long-term</i>		
	<i>By sea</i>	<i>By air</i>	<i>Total</i>	<i>By sea</i>	<i>By air</i>	<i>Total</i>
<i>Africa—</i>						
Commonwealth countries . . . . .	240	1,833	2,073	54	228	282
South Africa . . . . .	1,060	4,160	5,220	204	181	385
Other . . . . .	29	910	939	8	268	276
<i>America—</i>						
Canada . . . . .	869	9,347	10,216	369	977	1,346
Other Commonwealth countries . . . . .	38	540	578	12	49	61
United States of America . . . . .	1,432	62,849	64,281	177	4,265	4,442
Other . . . . .	43	2,022	2,065	10	279	289
<i>Asia—</i>						
Ceylon, India and Pakistan . . . . .	33	2,932	2,965	16	490	506
Hong Kong . . . . .	228	5,400	5,628	16	265	281
Malaysia and Singapore . . . . .	396	10,266	10,662	61	2,339	2,400
Other Commonwealth countries . . . . .	32	219	251	23	47	70
Japan . . . . .	238	11,113	11,351	13	817	830
Other . . . . .	110	90,931	91,041	17	2,698	2,715
<i>Europe—</i>						
United Kingdom and Ireland . . . . .	5,684	34,136	39,820	1,254	2,151	3,405
Other Commonwealth countries . . . . .	83	458	541	3	44	47
France . . . . .	74	2,936	3,010	19	203	222
Germany . . . . .	288	5,361	5,649	90	280	370
Greece . . . . .	49	951	1,000	28	319	347
Italy . . . . .	225	3,317	3,542	22	324	346
Netherlands . . . . .	480	4,153	4,633	105	172	277
Other . . . . .	330	8,005	8,335	117	1,537	1,654
<i>Oceania—</i>						
Fiji . . . . .	318	4,338	4,656	7	166	173
New Zealand . . . . .	4,133	92,634	96,767	2,150	7,619	9,769
Papua and New Guinea . . . . .	743	28,778	29,521	3	448	451
Other Commonwealth countries . . . . .	554	2,188	2,742	16	106	122
Other . . . . .	144	8,498	8,642	3	125	128
<b>Total . . . . .</b>	<b>17,853</b>	<b>398,275</b>	<b>416,128</b>	<b>4,797</b>	<b>26,397</b>	<b>31,194</b>

(a) Country in which the visitor was last resident for a period of one year or more.

**AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY, BY COUNTRY OF  
DISEMBARKATION(a) AND MODE OF TRANSPORT: AUSTRALIA, 1970**

Country of disembarkation(a)	Short-term			Long-term		
	By sea	By air	Total	By sea	By air	Total
<b>Africa—</b>						
Commonwealth countries . . . . .	12	919	931	3	252	255
South Africa . . . . .	817	2,830	3,647	647	560	1,207
Other . . . . .	752	12	764	1,673	1	1,674
<b>America—</b>						
Canada . . . . .	1,274	860	2,134	381	324	705
Other Commonwealth countries . . . . .	24	181	205	6	6	12
United States of America (excluding Hawaii) . . . . .	1,819	12,651	14,470	737	1,748	2,485
Hawaii . . . . .	1,933	13,423	15,356	42	1,400	1,442
Other . . . . .	255	1,030	1,285	330	167	497
<b>Asia—</b>						
Ceylon, India and Pakistan . . . . .	40	3,090	3,130	24	440	464
Hong Kong . . . . .	730	19,366	20,096	66	3,008	3,074
Malaysia and Singapore . . . . .	6,094	34,435	40,529	274	6,354	6,628
Other Commonwealth countries . . . . .	77	251	328	367	58	425
Japan . . . . .	8,195	2,707	10,902	74	126	200
Other . . . . .	731	28,824	29,555	31	1,935	1,966
<b>Europe—</b>						
United Kingdom and Ireland . . . . .	12,329	13,305	25,634	9,876	1,620	11,496
Other Commonwealth countries . . . . .	426	1,205	1,631	657	22	679
Greece . . . . .	954	5,200	6,154	1,588	1,778	3,366
Italy . . . . .	6,851	11,731	18,582	6,735	1,900	8,635
Netherlands . . . . .	531	2,807	3,338	600	145	745
Other . . . . .	1,105	6,157	7,262	1,260	899	2,159
<b>Oceania—</b>						
Fiji . . . . .	703	22,630	23,333	42	823	865
New Zealand . . . . .	3,122	77,870	80,992	1,009	3,555	4,564
Papua and New Guinea . . . . .	469	25,800	26,269	63	9,670	9,733
Other Commonwealth countries . . . . .	252	7,209	7,461	256	183	439
Other . . . . .	529	8,009	8,538	33	467	500
<b>Total . . . . .</b>	<b>50,024</b>	<b>302,502</b>	<b>352,526</b>	<b>26,774</b>	<b>37,441</b>	<b>64,215</b>

(a) Refers to the intended country of disembarkation from the particular ship or aircraft which takes the passenger from Australia.

**OVERSEAS VISITORS ARRIVING AND AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY  
BY STATED PURPOSE OF JOURNEY AND SEX: AUSTRALIA, 1970**

Purpose of journey	Short-term			Long-term		
	Males	Females	Persons	Males	Females	Persons
<b>OVERSEAS VISITORS ARRIVING</b>						
In transit . . . . .	36,128	22,202	58,330	..	..	..
Business . . . . .	57,947	5,311	63,258	4,004	1,337	5,341
Holiday . . . . .	160,018	101,212	261,230	3,324	3,646	6,970
Education . . . . .	7,679	3,818	11,497	3,084	1,916	5,000
Other and not stated . . . . .	13,410	8,403	21,813	7,854	6,029	13,883
<b>Total . . . . .</b>	<b>275,182</b>	<b>140,946</b>	<b>416,128</b>	<b>18,266</b>	<b>12,928</b>	<b>31,194</b>
<b>AUSTRALIAN RESIDENTS DEPARTING TEMPORARILY</b>						
Business . . . . .	60,084	7,424	67,508	8,478	3,879	12,357
Holiday . . . . .	107,431	135,118	242,549	15,333	17,252	32,585
Education . . . . .	3,893	2,146	6,039	2,132	1,466	3,598
Other and not stated . . . . .	28,841	7,589	36,430	6,985	8,690	15,675
<b>Total . . . . .</b>	<b>200,249</b>	<b>152,277</b>	<b>352,526</b>	<b>32,928</b>	<b>31,287</b>	<b>64,215</b>



## Short-term travel

Information about the countries of residence of short-term visitors, the countries of disembarkation of Australian residents travelling overseas in the short-term, and intended lengths of stay, are of particular interest to the tourist industry.

OVERSEAS VISITORS ARRIVING BY COUNTRY OF RESIDENCE AND INTENDED LENGTH OF STAY  
AND AUSTRALIAN RESIDENTS DEPARTING BY COUNTRY OF DISEMBARKATION AND INTENDED  
LENGTH OF STAY: AUSTRALIA, 1970

Country of residence (visitors) and country of disembarkation (residents)	Overseas visitors arriving—Intended length of stay						Australian residents departing—Intended length of stay					
	Under 1 week	1 week and under 1 month	1 month and under 3 months	3 months and under 12 months	Indefin- ite, not stated etc.	Total	Under 1 week	1 week and under 1 month	1 month and under 3 months	3 months and under 12 months	Indefin- ite, not stated etc.	Total
Africa—												
Commonwealth countries	546	461	454	406	206	2,073	30	107	387	335	72	931
South Africa . . . . .	1,757	1,505	983	557	418	5,220	10	477	1,360	1,451	349	3,647
Other . . . . .	292	230	152	119	146	939	..	5	23	499	237	764
America—												
Canada . . . . .	1,497	4,439	2,128	1,564	588	10,216	3	189	1,166	615	161	2,134
Other Commonwealth countries	107	218	149	78	26	578	..	17	138	38	12	205
United States of America— excluding Hawaii	18,217	32,605	7,757	3,817	1,885	64,281	{	150	3,877	5,324	3,718	14,470
Hawaii . . . . .	319	4,996	6,240	2,737	1,064	15,356		319	4,996	6,240	2,737	15,356
Other . . . . .	633	769	328	208	127	2,065		2	160	493	162	1,285
Asia—												
Ceylon, India, Pakistan . . . . .	637	880	505	555	388	2,965	40	736	1,182	927	245	3,130
Hong Kong . . . . .	1,345	1,797	1,104	685	697	5,628	684	5,521	7,658	4,652	1,581	20,096
Malaysia and Singapore . . . . .	2,140	2,960	1,985	2,025	1,552	10,662	1,411	12,815	13,332	8,239	4,732	40,529
Other Commonwealth countries	50	76	60	47	18	251	..	..	..	26	259	43
Japan . . . . .	4,105	4,585	1,331	531	799	11,351	54	2,290	7,513	441	604	10,902
Other . . . . .	81,578	3,854	2,481	1,685	1,443	91,041	648	5,087	5,562	3,662	14,596	29,555
Europe—												
United Kingdom and Ireland	6,297	10,834	10,507	8,494	3,688	39,820	53	1,712	8,079	13,304	2,486	25,634
Other Commonwealth countries	38	69	305	90	39	541	3	2	184	1,238	204	1,631
Greece . . . . .	167	121	88	371	253	1,000	15	190	1,144	3,632	1,173	6,154
Italy . . . . .	820	842	551	804	525	3,542	34	873	3,253	11,372	3,050	18,582
Netherlands . . . . .	691	723	1,031	1,339	849	4,633	8	179	1,850	1,098	203	3,338
Other . . . . .	4,436	5,095	2,708	3,032	1,723	16,994	27	479	2,426	3,671	659	7,262
Oceania—												
Fiji . . . . .	1,148	1,185	1,031	865	427	4,656	2,070	17,022	2,050	1,079	1,112	23,333
New Zealand . . . . .	24,184	47,503	10,026	6,614	8,440	96,767	6,745	53,114	11,772	5,453	3,908	80,992
Papua and New Guinea . . . . .	3,813	6,265	10,650	7,835	958	29,521	3,103	9,756	6,346	3,982	3,082	26,269
Other Commonwealth countries	509	764	626	617	226	2,742	815	5,720	411	147	368	7,461
Other . . . . .	1,723	2,223	2,953	702	1,041	8,642	687	4,793	1,540	975	543	8,538
Total . . . . .	156,730	130,003	59,893	43,040	26,462	416,128	16,911	130,117	89,459	73,992	42,047	352,526

Short-term travel is subject to marked seasonal variation, December being the peak month for the arrival of visitors and the departure of Australian residents.

OVERSEAS VISITORS AND AUSTRALIAN RESIDENTS: ARRIVALS AND DEPARTURES  
BY MONTH OF ARRIVAL OR DEPARTURE AND MODE OF TRANSPORT  
AUSTRALIA, 1970

Month	Overseas visitors						Australian residents					
	Arriving			Departing			Departing			Returning		
	By sea	By air	Total	By sea	By air	Total	By sea	By air	Total	By sea	By air	Total
January . . . . .	1,210	32,402	33,612	2,029	42,270	44,299	3,419	20,298	23,717	2,377	39,254	41,631
February . . . . .	1,765	33,214	34,979	2,038	35,391	37,429	4,819	15,537	20,356	2,649	21,180	23,829
March . . . . .	1,948	34,043	35,991	1,747	35,085	36,832	5,850	23,596	29,446	3,362	21,088	24,450
April . . . . .	683	30,168	30,851	2,118	33,624	35,742	4,857	25,201	30,058	2,066	19,813	21,879
May . . . . .	1,937	30,797	32,734	2,176	34,713	36,889	6,370	31,344	37,714	3,254	23,868	27,122
June . . . . .	982	26,286	27,268	1,796	27,833	29,629	4,963	29,394	34,357	3,296	21,067	24,363
July . . . . .	888	28,616	29,504	1,004	27,942	28,946	2,330	25,914	28,244	3,617	25,123	28,740
August . . . . .	704	34,008	34,712	1,396	34,203	35,599	4,020	29,610	33,630	2,832	31,599	34,431
September . . . . .	1,018	29,567	30,585	1,311	32,369	33,680	2,221	18,244	20,465	3,533	36,330	39,863
October . . . . .	1,762	35,453	37,215	1,876	34,823	36,699	4,521	19,033	23,554	5,776	27,991	33,767
November . . . . .	2,207	38,747	40,954	2,028	37,157	39,185	1,969	19,130	21,099	5,301	22,701	28,002
December . . . . .	2,749	44,974	47,723	1,297	34,813	36,110	4,685	45,201	49,886	4,342	19,510	23,852
Total . . . . .	17,853	398,275	416,128	20,816	410,223	431,039	50,024	302,502	352,526	42,405	309,524	351,929

### Long-term travel

Many long-term travellers travel for business and education purposes and intend to follow an occupation in the country visited during their stay in Australia or overseas. This is evident from the statistics shown in the table on page 379 which classify travellers according to the purpose of their journey. Statistics of the occupations of long-term visitors arriving in Australia and Australian residents departing overseas (long-term) are of general interest and are shown in the following table.

OVERSEAS VISITORS ARRIVING AND AUSTRALIAN RESIDENTS DEPARTING, BY  
OCCUPATION AND SEX: AUSTRALIA, 1970

Occupation group	Overseas visitors arriving			Australian residents departing		
	Males	Females	Persons	Males	Females	Persons
Professional, technical, and related workers .	2,588	1,709	4,297	4,787	5,071	9,858
Administrative, executive, and managerial workers . . . . .	1,171	93	1,264	1,761	228	1,989
Clerical workers . . . . .	651	2,091	2,742	2,210	5,825	8,035
Sales workers . . . . .	686	231	917	1,047	587	1,634
Farmers, fishermen, hunters, timber getters, and related workers . . . . .	661	21	682	593	35	628
Miners, quarrymen, and related workers . .	114	..	114	224	..	224
Workers in transport and communication . .	582	103	685	1,129	276	1,405
Craftsmen and production-process workers .	3,401	276	3,677	6,897	978	7,875
Labourers . . . . .	797	..	797	4,008	..	4,008
Service (protective and other), sport, and recreation workers . . . . .	968	572	1,540	974	934	1,908
Occupation inadequately described or not stated . . . . .	1,449	232	1,681	933	138	1,071
Persons not in the work force—						
Children and students . . . . .	4,919	3,770	8,689	7,784	7,590	15,374
Other . . . . .	279	3,830	4,109	581	9,625	10,206
<b>Total . . . . .</b>	<b>18,266</b>	<b>12,928</b>	<b>31,194</b>	<b>32,928</b>	<b>31,287</b>	<b>64,215</b>

### Direct transit travellers

As indicated on page 377, all the preceding figures in this section exclude persons who arrive in and depart from Australia on the same ship's journey or on the same flight. Persons thus excluded are not normally considered visitors to Australia. For instance, settlers or other persons going to New Zealand, Papua and New Guinea, or other neighbouring countries, or leaving such countries may travel through Australia on their way. On the other hand, all persons visiting Australia on cruise vessels, which may remain in Australian waters for a considerable time, are also treated as direct transit travellers and are thus excluded from the figures shown on previous pages. Information about direct transit passengers on ships calling at Australian ports is given in the next table.

OVERSEAS SHIPPING PASSENGERS IN DIRECT TRANSIT(a)  
AUSTRALIA, 1969 AND 1970

Approximate period from first to last Australian port (days)	1969		1970	
	Passengers	Passenger days	Passengers	Passenger days
Less than 3 . . . . .	3,989	6,601	3,942	5,057
3 and less than 5 . . . . .	4,237	12,990	4,701	14,924
5 and less than 7 . . . . .	5,960	34,001	6,516	37,445
7 and less than 9 . . . . .	5,735	43,840	3,745	28,107
9 and less than 11 . . . . .	4,549	41,376	3,362	30,668
11 and less than 22 . . . . .	1,341	15,958	2,267	26,304
22 and over . . . . .	109	3,395	161	4,506
<b>Total . . . . .</b>	<b>25,920</b>	<b>158,161</b>	<b>24,694</b>	<b>147,011</b>

(a) Persons who arrived in and departed from Australia on the same ship's voyage.

### Sea cruises from Australia

Excluded from the foregoing statistics are passengers on short pleasure cruises in the south-west Pacific, commencing and finishing in Australia on ships not then engaged in regular voyages. During 1970 forty-eight such cruises, carrying 43,584 passengers, were completed.

### Tourist organisation

The Australian Tourist Commission was established by the Commonwealth Government under the *Australian Tourist Commission Act 1967*. Its objectives are the encouragement of visits to Australia, and travel in Australia by people from other countries. The seven man Commission comprises a chairman appointed by the Commonwealth Government; two appointees to represent private industry, selected by the Commonwealth Government from a panel of names put forward by the Australian National Travel Association; two other voting members, at least one of whom is an officer of the Public Service of the Commonwealth; and two non-voting representatives nominated by the State Governments.

For 1969-70 the Commonwealth Government provided \$2,100,000 to the Commission, to be spent, mainly in overseas countries, on advertising campaigns and in associated promotional activities. The Commission brings to Australia travel agents, writers, photographers and other publicists to see at first hand what the country has to offer visitors. It takes no part in the detailed organisation of tourist activities in Australia but is a member of the Australia and New Zealand Tourist Directors' Conference and provides the secretariat for the Tourist Ministers' Council. The Minister in Charge of Tourist Activities is a member of the Tourist Ministers' Council together with the six States, the Northern Territory and the Territory of Papua and New Guinea. The Commission has its Head Office in Melbourne and branch offices in London, Frankfurt, New York, Chicago, Los Angeles, Auckland, Tokyo, and Sydney.

The Australian National Travel Association, which is described on pages 1161-2 of the special article Travel and Tourism in Year Book No. 52, was formerly responsible, *inter alia*, for the promotion overseas of Australia as a tourist destination. Since the creation of the Australian Tourist Commission, the Association concentrates on the encouragement of the growth and development of travel and tourism within Australia, and the improvement of the standard and variety of facilities and services provided by private enterprise for the use of both domestic and overseas visitors. It acts as a co-ordinating body for its members, provides a clearing house for information, and conducts surveys into aspects of local tourist activity. The Association is governed by a Board representative of travel and tourist interests on which the Commonwealth Government is no longer represented. The Association's office is located in Sydney.



## CHAPTER 13

### WELFARE SERVICES

This chapter relates to welfare services other than those concerned specifically with education, health and repatriation. The latter are dealt with, in the main, in the relevant chapters of this Year Book. Apart from a summary of government expenditure on welfare services, the chapter is devoted to a description in some detail of the services provided by the Commonwealth. For information on the many important welfare services provided by State and local governments, especially in the fields of child and Aboriginal welfare, reference should be made to the Year Books or Statistical Registers of the States and the annual reports of the State departments concerned. Information on pension and superannuation schemes provided for government and semi-government employees, mine workers, parliamentarians, and employees of private business is included in the chapter Private Finance. *See also* Year Book No. 55, 1969, page 456, for short descriptions of the National Safety Council of Australia, lifesaving organisations, the Royal Humane Society and the Order of St John.

There are numerous welfare services provided by charitable and other non-government institutions and organisations. There are institutions providing shelter and care for needy, aged, infirm or handicapped persons, neglected children, destitute persons, wayward boys and girls, and the like. Many organisations, too, provide aid in kind (food, clothing, etc.), auxiliary medical and nursing services, and other assistance to relieve suffering and hardship. Considerable work is also done by such organisations in the rehabilitation or establishment in the community of various types of people, such as prisoners and migrants, and in the prevention and alleviation of cruelty and maltreatment of any sort. Comprehensive information regarding the activities of such organisations is not available.

Further information on subjects dealt with in this chapter is included in the annual bulletins *Australian National Accounts*; *Commonwealth Finance*; and *State, Territory and Local Government Authorities' Finance and Government Securities*. Current and summarised information on Commonwealth social services is contained in the *Quarterly Summary of Australian Statistics* and the *Monthly Review of Business Statistics*.

#### Commonwealth expenditure on welfare services

This section deals with various government payments for the relief of the aged, indigent, infirm, widowed and unemployed, assistance to families, Aboriginal welfare, etc. For summary statements of cash payments to persons made by public authorities under various functional heads, *see Australian National Accounts* and the other annual bulletins mentioned above. Expenditure by State governments on certain welfare services and on Aboriginal welfare is shown on page 403. Commonwealth expenditure on welfare services is, in the main, financed through the National Welfare Fund. A brief description of the operation of this trust fund and details of the itemised welfare expenditure are provided in the following sections. The cost of other welfare services is met from general or special departmental appropriations, other trust funds, or specific purpose grants to the States. Information on the major items which are not paid from the National Welfare Fund is included on pages 399–402. Chapter 18—Public Finance and, in more detail, the bulletin *Commonwealth Finance* provide analyses of Commonwealth expenditure by function and economic type. The cost of administering each Commonwealth benefit is not separately compiled.

#### The National Welfare Fund

The National Welfare Fund was established by the *National Welfare Fund Act 1943* to finance a scheme of national welfare and has operated from 1 July 1943. At the Fund's commencement it was used to finance funeral benefits and maternity allowances, but other social and health benefits were made a charge on the fund from time to time, and at present expenditure on all benefits except repatriation, telephone rental concessions and a few minor social and health benefits is met from the fund. The fund is used only to finance the benefits themselves; it is not used to finance the cost of

administering the benefits, or of capital works associated with the benefits. Since the contributions to the fund from Consolidated Revenue equal expenditure from the fund the balances in the fund grow each year by the interest on investment of these balances.

**NATIONAL WELFARE FUND: EXPENDITURE, INTEREST  
AND BALANCES 1965-66 TO 1969-70**  
(\$'000)

Year	Expenditure (a)	Interest on investments	Balance in fund at end of year
1965-66 . . . . .	941,574	4,241	426,822
1966-67 . . . . .	1,031,117	4,284	431,106
1967-68 . . . . .	1,075,049	4,327	435,433
1968-69 . . . . .	1,162,350	4,370	439,803
1969-70 . . . . .	1,341,800	4,415	444,218

(a) Met by equal contributions to the fund from consolidated revenue.

**COMMONWEALTH EXPENDITURE FROM NATIONAL WELFARE FUND  
STATES, TERRITORIES, ETC., 1969-70**  
(\$'000)

Service, etc.	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Abroad	Total
<b>Social services—</b>										
Age and invalid pensions	248,904	163,349	102,939	58,720	44,637	19,517	1,627	1,722	566	641,982
Widows' pensions . . . . .	30,151	21,671	12,479	8,053	5,600	2,927	372	410	90	81,753
Funeral benefits . . . . .	600	382	239	143	102	41	..	4	..	1,512
Maternity allowances . . . . .	2,741	2,297	1,177	698	645	259	79	102	2	8,000
Child endowment(a) . . . . .	75,504	62,419	32,471	20,287	17,894	7,416	1,502	2,588	63	220,143
Unemployment benefits . . . . .	2,451	1,795	2,814	1,008	407	360	21	11	..	8,868
Sickness benefits . . . . .	2,773	1,956	1,064	576	508	199	34	37	..	7,146
Special benefits(b) . . . . .	818	1,074	303	174	123	68	10	7	..	2,578
Sheltered employment allowances . . . . .	155	..	..	207	74	..	..	..	..	436
Commonwealth Rehabilitation Service(c) . . . . .	924	725	392	342	284	91	..	..	..	2,758
States Grants (Deserted Wives) . . . . .	726	101	426	210	342	77	..	..	..	1,882
Personal Care Subsidy(d) . . . . .	282	333	210	174	89	44	..	..	..	1,133
Delivered Meals Subsidy(e) . . . . .	63	49	18	39	20	6	..	..	..	196
<b>Total social services</b> . . . . .	<b>366,094</b>	<b>256,150</b>	<b>154,531</b>	<b>90,631</b>	<b>70,725</b>	<b>31,008</b>	<b>3,646</b>	<b>4,881</b>	<b>721</b>	<b>978,385</b>
<b>Total health services(f)</b> . . . . .	<b>140,157</b>	<b>87,343</b>	<b>48,926</b>	<b>33,560</b>	<b>27,262</b>	<b>10,227</b>	<b>443</b>	<b>958</b>	<b>159</b>	<b>(g)351,004</b>
Rental losses(h) . . . . .	..	..	74	..	..	..	..	..	..	74
Home savings grants . . . . .	3,969	4,228	1,909	1,223	590	300	2	116	..	12,336
<b>Grand total</b> . . . . .	<b>510,220</b>	<b>347,721</b>	<b>205,440</b>	<b>125,414</b>	<b>98,577</b>	<b>41,534</b>	<b>4,091</b>	<b>5,955</b>	<b>880</b>	<b>(g)1,341,800</b>

(a) Includes payments for student children aged 16 to 20 years. (b) Includes special benefits paid to migrants in Commonwealth centres or hostels awaiting their first placement in employment in Australia. (c) Includes expenditure on training scheme for widow pensioners—commenced September 1968. (d) Commenced on 14 October 1969. (e) Commenced on 15 April 1970. (f) Details of expenditure from the National Welfare Fund on health services are included in Chapter 14—Public Health, page 409. (g) Includes \$1,968,000 for some health services not allocable by State and Territory. (h) Contributions to States under the Commonwealth and State Housing Agreement Act 1945 for losses on rental housing.

**COMMONWEALTH EXPENDITURE FROM NATIONAL WELFARE FUND  
TOTAL, 1965-66 TO 1969-70**

Service, etc.	1965-66	1966-67	1967-68	1968-69	1969-70	
					Amount	Per head
	\$'000	\$'000	\$'000	\$'000	\$'000	\$
<b>Social services—</b>						
Age and invalid pensions . . . . .	442,355	481,840	513,984	558,587	641,982	51.59
Widows' pensions . . . . .	50,017	56,438	61,061	69,080	81,753	6.57
Funeral benefits . . . . .	1,050	1,334	1,338	1,571	1,512	0.12
Maternity allowances . . . . .	7,159	7,294	7,349	7,960	8,000	0.64
Child endowment(a) . . . . .	176,432	199,282	187,920	193,263	220,143	17.69
Unemployment, sickness and special benefits(b) . . . . .	15,557	19,044	18,832	16,830	18,592	1.49
Sheltered employment allowances . . . . .	..	..	104	288	436	0.04
Commonwealth Rehabilitation Service(c) . . . . .	1,660	1,844	1,944	2,260	2,758	0.22
States Grants (Deserted Wives) . . . . .	..	..	201	1,149	1,882	0.15
Other(d)(e) . . . . .	..	..	..	368	1,328	0.11
<i>Total social services</i> . . . . .	694,229	767,076	792,734	851,356	978,385	78.63
<b>Health services(f)—</b>						
<i>Total</i> . . . . .	233,785	252,014	268,972	297,918	351,004	28.21
Rental losses(h) . . . . .	213	142	44	60	74	..
Homes savings grants . . . . .	13,346	11,885	13,299	13,015	12,336	0.99
<b>Grand total</b> . . . . .	941,574	1,031,117	1,075,049	1,162,350	1,341,800	107.84

For footnotes (a), (b), (c), (d), (e), (f) and (h) see second table on page 384.

### Commonwealth social services

Under the provisions of Section 51 of the Constitution, the Commonwealth Government is empowered to legislate on:

'(xxiii) Invalid and old age pensions:

'(xxiiiA) The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances:'.

The latter paragraph was inserted in the Constitution after being accepted by the electors at a referendum in 1946.

Before 1947, Commonwealth social service benefits were paid under various Acts. On 1 July 1947, with the passage of the *Social Services Consolidation Act 1947*, all Acts providing social service benefits were amalgamated. The Act is at present styled the *Social Services Act 1947-1970*.

### Reciprocal social services agreements with other countries

*New Zealand.* An agreement between the Governments of Australia and New Zealand for reciprocity in social services came into operation on 3 September 1943 and was amended from 1 July 1949. The reciprocal arrangements cover age and invalid pensions, widows' pensions, child endowment, and unemployment and sickness benefits, and apply to both permanent and temporary changes of residence. Residence in one country may be treated as residence in the other country in relation to entitlement to benefits in which a residential qualification applies. Persons from one country taking up a permanent residence in the other country become eligible for any of the specified benefits of the new country under the same conditions (with one or two exceptions) as apply to citizens of that country. Persons in receipt of any of the specified benefits in one country may continue to receive those benefits while temporarily absent in the other country.



*United Kingdom.* A reciprocal agreement on social services between United Kingdom and Australia came into operation on 7 January 1954. Amendments became effective from 1 April 1958 and 1 October 1962. Under the current agreement residence in one country may be treated as residence in the other country as the basis for entitlement to benefits in which a residential qualification applies. Australians going to the United Kingdom for permanent residence are treated in the United Kingdom as if they had been insured under the National Insurance Scheme while in Australia, so that they can qualify for various National Insurance benefits. There is also provision for the safeguard of social service rights for persons going from one country to the other for temporary residence.

### Social service benefits provided

The social service benefits provided by the Commonwealth Government under the *Social Services Act* 1947-1970, and the date on which each came into operation, are:

Age pension . . . . .	1 July 1909
Wives' and children's allowances for age pensioners . . . . .	14 October 1965
Invalid pension . . . . .	15 December 1910
Guardians' allowances for widowed and other unmarried age and invalid pensioners with children in their care . . . . .	14 October 1965
Wives' and children's allowances for pensioners who are invalids . . . . .	8 July 1943
Special payments to a surviving pensioner . . . . .	10 October 1968
Widows' pensions . . . . .	30 June 1942
Supplementary assistance (age, invalid and widows' pensions) . . . . .	15 October 1958
Supplementary allowance (long term sickness benefit) . . . . .	28 September 1970
Widows' pensions—children's allowances . . . . .	2 October 1956
Funeral benefit . . . . .	1 July 1943
Maternity allowance . . . . .	10 October 1912
Child endowment . . . . .	1 July 1941
Child endowment—student children . . . . .	14 January 1964
Unemployment benefit . . . . .	1 July 1945
Sickness benefit . . . . .	1 July 1945
Sickness benefit (long term) . . . . .	28 September 1970
Special benefit . . . . .	1 July 1945
Sheltered employment allowance . . . . .	30 June 1967
Commonwealth Rehabilitation Service . . . . .	10 December 1948
Training scheme for widow pensioners . . . . .	27 September 1968

### Age and invalid pensions

Age pensions are payable to men, sixty-five years of age and over, and women, sixty years of age and over, who have lived in Australia continuously for at least ten years, which need not be immediately prior to the date of claim for a pension. If a person has completed five years, but not ten years, continuous residence, and has lived in Australia for periods which exceed a total of ten years, the period of continuous residence otherwise required is reduced by the total of his periods of residence in Australia in excess of ten years. Any periods of absence during which a person's home remains in Australia, and absences in certain other circumstances, are counted as residence, and any absence in an external Territory of the Commonwealth, while not counting as residence, does not interrupt continuity of residence in Australia. Residence in New Zealand or the United Kingdom may be treated as residence in Australia.

Invalid pensions are payable to persons, sixteen years of age and over, who have lived in Australia for a continuous period of five years (including certain absences) at any time, and who are permanently incapacitated for work to the extent of at least eighty-five per cent, or permanently blind. If the incapacity or blindness first occurred outside Australia, except during a temporary absence, the residence qualification is the same as for an age pension.

*Current rates of pension.* The maximum standard rate was increased to \$806 per annum (\$15.50 a week) from 8 October 1970. This is payable to a single, widowed, or divorced pensioner, a married man whose wife receives a wife's allowance, or a married pensioner whose spouse is not receiving an age or invalid pension, a tuberculosis allowance, or a service pension. The standard rate may also be paid to each of a married pensioner couple who, because of failing health, have lost the economies of living together. The maximum married rate was also increased from 8 October 1970, and is \$1,430 per annum (\$27.50 a week) for a married couple, both pensioners, i.e. \$715 per annum (\$13.75 a week) each. For a married person whose spouse receives a tuberculosis allowance, or a service pension, the maximum rate is also \$715 per annum (\$13.75 a week).

From 8 April 1971 the pension payable to persons in receipt of the maximum rate was increased by \$26 per annum (50 cents a week) to \$832 per annum (\$16 a week) in the case of the standard rate pension and to \$1,482 per annum (\$28.50 a week) in the case of the married pensioner couple.

A wife's allowance may be granted, subject to the means test, to the wife of an invalid pensioner or of an age pensioner permanently incapacitated, blind, or who has the care of a child, if she is not receiving an age or invalid pension, or a service pension under the *Repatriation Act 1920-1970* (see Chapter 5, Repatriation). The maximum annual rate of a wife's allowance is \$364 per annum (\$7 a week).

Additional pension for dependent children under 16 years is payable, subject to a means test, at the rate of \$130 per annum (\$2.50 a week) for the first child and \$182 per annum (\$3.50 a week) for each other child. Widowed or other unmarried age or invalid pensioners with a dependent child may receive a guardian's allowance of up to \$4 a week, or up to \$6 a week if the child is under 6 years of age or is an invalid child requiring full-time care. Eligibility for the additional pension for children is extended to include a child over sixteen years until he reaches twenty-one years, provided he is wholly or substantially dependent on the pensioner and is receiving full-time education at a school, college or university. Supplementary assistance of up to \$2 a week, subject to a means test, is available to pensioners receiving the maximum standard rate pension if they pay rent or pay for board and lodging or for lodging.

At 30 June 1970, 388,234 age and 97,859 invalid pensioners in the standard rate category were receiving a pension of \$15 a week or more and 155,651 age and invalid pensioners were in receipt of supplementary assistance. In the married rate category 230,330 age and 23,140 invalid pensioners were receiving a pension of \$13.25 a week or more.

Special payments to a surviving pensioner became operative from 10 October 1968. On the death of one member of a married pensioner couple the surviving pensioner spouse becomes entitled to receive, for up to six fortnightly instalments, the equivalent of the two pensions that would have been paid if the spouse had not died. For the purpose of this provision the term 'pensioner' includes a person in receipt of an age, invalid or service pension; a wife's allowance; a rehabilitation allowance; or a sheltered employment allowance.

A table showing the maximum rates of pension operating since 1 July 1909 at dates prior to 14 October 1965 is included on page 608 of Year Book No. 51. Details of the respective rates and allowances payable since 14 October 1965 are included in subsequent Year Books.

*Means test.* Age and invalid pensions (other than pensions paid to blind persons) and allowances paid to wives are subject to a means test which applies to income and property. The rate of pension payable depends on the claimant's *means as assessed*. These consist of his annual rate of income plus a property component equal to \$2 for each complete \$20 of his net property above \$400. A person's *means as assessed* may consist entirely of income, entirely of the property component, or of various combinations of income and property component. The rate of pension payable in any case is reduced by half of the amount by which *means as assessed* exceed \$442 where the pensioner is married or \$520 where the pensioner is single, widowed, or divorced. Where the standard rate applies, no pension is payable where the value of property is \$21,720 or more (\$25,880 or more if qualified for a guardian's allowance at the lower rate and \$27,960 at the higher rate) if the pensioner is single, widowed or divorced; or \$38,240 in the case of a married couple. The wife's allowance is affected by income and property on the same basis as the pension, i.e. it is reduced by half the amount of *means as assessed* over \$442. Supplementary assistance is reduced by the amount by which *means as assessed* exceed \$52.

Certain types of income are excepted. The main exceptions are: income from property; gifts or allowances from children, parents, brothers, or sisters; benefits (other than annuities) from friendly societies; child endowment or other payments for children; Commonwealth health benefits and amounts received from registered benefit organisations. A pensioner's income may also be reduced by up to \$208 per annum (\$4 a week) for each dependent child under sixteen years (twenty-one years if a full-time student).

Certain types of property are disregarded. They include the permanent home of the pensioner, his furniture and personal effects, the surrender value (up to \$1,500) of life insurance policies, the capital value of annuities or contingent interests, and the value of any reversionary interests.

For the purposes of the means test the income and property of a married person are considered to be half the total income and property of the husband and wife unless they are legally separated or in other special circumstances.

## AGE AND INVALID PENSIONS: STATES AND TERRITORIES, 30 JUNE 1970

<i>Pensions in force</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Age—									
Males .	85,403	60,018	39,405	21,806	17,329	7,312	648	630	232,551
Females .	207,486	146,590	83,142	51,571	38,688	16,603	781	1,595	546,456
Persons .	292,889	206,608	122,547	73,377	56,017	23,915	1,429	2,225	779,007
Invalid—									
Males .	30,875	16,917	13,022	6,473	4,453	2,376	338	186	74,640
Females .	24,575	12,836	10,962	5,226	3,480	1,675	208	164	59,126
Persons .	55,450	29,753	23,984	11,699	7,933	4,051	546	350	133,766

## NEW PENSIONERS, BY SEX AND MARITAL STATUS: AUSTRALIA, 1969-70

<i>Marital status</i>	<i>Age pensioners</i>			<i>Invalid pensioners</i>			<i>Total</i>
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>	
Single(a) . . .	4,520	9,180	13,700	6,980	4,784	11,764	25,464
Married . . .	30,832	37,394	68,226	10,203	5,467	15,670	83,896
Widowed . . .	5,362	23,494	28,856	850	1,449	2,299	31,155
Divorced . . .	680	1,309	1,989	639	630	1,269	3,258
Total . . .	41,394	71,377	112,771	18,672	12,330	31,002	143,773

(a) Includes married but permanently separated.

The average age of new age pensioners was 69.7 years for men and 67.8 years for women.

## NEW INVALID PENSIONERS, BY AGE GROUP: AUSTRALIA, 1969-70

		<i>16-19 years</i>	<i>20-44 years</i>	<i>45-59 years</i>	<i>60-64 years</i>	<i>65 years and over</i>	<i>Total</i>
Males . . .	number	1,294	3,613	7,546	5,796	423	18,672
Females . . .	number	1,154	2,807	7,925	219	225	12,330
Persons . . .	number	2,448	6,420	15,471	6,015	648	31,002
	<i>Per cent</i>	8	21	50	19	2	100

Persons at or above the qualifying age for age pensions, when granted invalid pensions, are generally those with insufficient residence to qualify for age pension.



## AGE AND INVALID PENSIONS: SUMMARY, AUSTRALIA, 1965-66 TO 1969-70

Year	Pensioners at end of year				Average weekly pension as at end of year			
	Age		Invalid	Total	Total payments during year(b)	Age(c)	Invalid (c)	Age and invalid combined (c)
	Number	Rate(a)						
			No.	No.	\$'000	\$	\$	\$
1965-66	636,984	530	106,645	743,629	442,355	11.33	12.24	11.46
1966-67	651,363	(d)532	112,314	763,677	481,840	12.38	13.30	12.52
1967-68	(e)682,265	546	(e)114,745	(e)797,010	513,984	(f)12.22	13.37	(f)12.39
1968-69	(g)705,311	555	(g)121,744	(g)827,055	558,587	13.00	14.70	13.26
1969-70	779,007	602	133,766	912,773	641,982	13.61	15.70	13.91

(a) Number of pensioners per 1,000 persons of pensionable age (males aged 65 years and over and females aged 60 years and over). (b) Includes allowances and supplementary assistance. (c) Includes supplementary assistance, additional pensions for children, and guardian's allowance, where applicable. (d) For earlier years persons of pensionable age—see footnote (a)—excludes Aborigines, while the number of pensioners includes Aborigines throughout. (e) The 1967-68 figures are adjusted by reducing the number of invalid pensioners by 3,178 and increasing the number of age pensioners by 1,485 following the introduction of computer processing in New South Wales. (f) Decrease in average rates for age pensions at 30 June 1968 was due to the increased number of new pensioners who became eligible for part pensions as a result of amending legislation approved in April 1967. (g) The 1968-69 figures are adjusted by reducing the number of invalid pensioners by 1,583 and increasing the number of age pensioners by 1,223 following the introduction of computer processing in Victoria.

**Widows' pensions**

*Rates and conditions.* Widows' pensions are payable according to the following classes. The rates shown are those payable from 29 September 1970 when widows' pensions were increased.

**Class 'A'.** A widow who has the custody, care and control of one or more children under the age of sixteen years—The amount payable is the standard rate pension of \$806 per annum (\$15.50 a week) and a mother's allowance of \$208 per annum (\$4 a week) which is increased to \$312 per annum (\$6 a week) if caring for a child under six years of age or an invalid child requiring full-time care. In addition, extra pension of \$130 per annum (\$2.50 a week) for the first or only child under sixteen years and \$182 per annum (\$3.50 a week) for each other child under sixteen years is payable, subject to the means test. Payment may be made for a child over sixteen years until he reaches twenty-one years, if he is wholly or substantially dependent on the widow and is receiving full-time education at a school, college or university.

**Class 'B'.** A widow who has no children under sixteen years of age or eligible full-time student children in her custody, care and control, and who is not less than fifty years of age or who, after having attained the age of forty-five years, ceased to receive a Class 'A' widow's pension because she no longer had the custody, care and control of a child—\$715 per annum (\$13.75 a week).

**Class 'C'.** A widow who is under fifty years of age and has no children under the age of sixteen years, or eligible full-time student children, in her custody, care and control, but is in necessitous circumstances within the twenty-six weeks after the death of her husband—\$13.75 a week for not more than twenty-six weeks after the death of her husband. If the widow is pregnant this period may be extended until the child's birth. She may then become eligible for a Class 'A' widow's pension.

As from 13 April 1971, persons in receipt of a Class 'A' widow's pension or a Class 'B' widow's pension at the maximum rate, received an increase of \$26 per annum (50 cents a week) so that the maximum standard rate in the case of a Class 'A' widow rose to \$832 per annum (\$16 a week) and the maximum Class 'B' widow rate to \$741 per annum (\$14.25 a week). All persons in receipt of Class 'C' widows' pensions received the increase, so that their pensions were also increased to \$14.25 a week.

Widow pensioners may receive supplementary assistance of up to \$104 per annum (\$2 a week), subject to a means test, if they pay rent or pay for board and lodging or for lodging.

For classes 'A' and 'B' the term 'widow' includes a wife who has been deserted by her husband without just cause for a period of at least six months; a divorcee; a woman whose husband has been imprisoned for at least six months; and a woman whose husband is in a mental hospital. Certain dependent females also may qualify for 'A', 'B' or 'C' Class pensions.

A period of residence in Australia before claiming pension is not required if a woman and her husband were residing permanently in Australia when she became a widow. In other circumstances, five years continuous residence immediately preceding lodgment of the claim is required, but this is waived in the case of a woman whose husband has died overseas if she has resided continuously in Australia for ten years at any time and returns to Australia to live.

A widow's pension is not payable to a woman receiving an age or invalid pension, a sheltered employment allowance, a tuberculosis allowance, or a war widow's pension, or to a deserted wife or divorcee who has not taken reasonable action to obtain maintenance from her husband or former husband.

*Means test.* Widows' pensions are subject to a means test on income and property. The pension payable depends on the claimant's *means as assessed*. These consist of her annual rate of income together with a property component equal to \$2 for every complete \$20 by which the value of her property is in excess of a stipulated sum. A Class 'A' widow has a basic exemption of \$2,000 when the value of her property exceeds \$4,500, but no property component is calculated where she has property of no more than \$4,500 in value. A Class 'A' pension is not payable where a widow has property valued at \$27,480 or more, or, if caring for a child under six years of age or an invalid child requiring full-time care, has property valued at \$29,560 or more. In the case of a Class 'B' widow, \$400 of property is exempt and no Class 'B' pension is payable where property is \$19,900 or more. In each case the maximum rate of pension is reduced by half the amount by which the widow's *means as assessed* exceed \$520. There is no specific means test for the Class 'C' pension, which is paid only where it is evident that a widow has insufficient means of support. The types of income and property disregarded for means test purposes are the same as for age and invalid pensions. Supplementary assistance is reduced by the amount by which *means as assessed* exceed \$52.

The average age of new widow pensioners admitted during 1969-70 was: Class 'A', 37.5 years; Class 'B', 57.1 years; Class 'C', 42.9 years; and for all classes, 45.6 years.

### Pensions

#### WIDOWS' PENSIONS: STATES, TERRITORIES, ETC., 1969-70

State, Territory, etc.	Number admitted —all classes (a)	Pensions current at end of year				Average weekly pension at end of year (b)	Amount paid in pensions during year (b) (c)
		Class 'A'	Class 'B'	Class 'C'	All classes		
						\$	\$'000
New South Wales . . .	8,169	16,217	15,781	36	32,034	18.96	30,151
Victoria . . .	6,346	11,797	11,504	17	23,318	18.85	21,671
Queensland . . .	3,079	6,678	6,389	18	13,085	19.21	12,479
South Australia . . .	2,178	4,317	4,291	8	8,616	18.80	8,053
Western Australia . . .	1,651	2,903	3,178	5	6,086	18.40	5,600
Tasmania . . .	778	1,680	1,276	2	2,958	19.91	2,927
Northern Territory . .	104	209	146	..	355	21.80	372
Australian Capital Terri- tory . . .	161	263	206	..	469	18.74	410
Abroad . . .	..	(d)	(d)	(d)	(d)	..	90
<b>Total . . .</b>	<b>22,466</b>	<b>44,064</b>	<b>42,771</b>	<b>86</b>	<b>86,921</b>	<b>18.96</b>	<b>81,753</b>

(a) Excludes transfers from one class to another. (b) Includes supplementary assistance and allowances. (c) Includes payments to benevolent homes for maintenance of pensioners. (d) Included in the figures for the State or Territory in which the pensioner is normally domiciled.

#### WIDOWS' PENSIONS: SUMMARY, AUSTRALIA, 1965-66 TO 1969-70

Year	Number admitted —all classes (a)	Pensions current at end of year				Average weekly pension at end of year (b)	Amount paid in pensions during year (b) (c)
		Class 'A'	Class 'B'	Class 'C'	All classes		
						\$	\$'000
1965-66 . . .	13,972	31,796	36,703	107	68,606	14.53	50,017
1966-67 . . .	15,727	34,526	38,259	105	72,890	15.81	56,438
1967-68 . . .	16,104	(d)35,899	(d)39,065	105	(d)75,069	(e)15.79	61,061
1968-69 . . .	15,993	38,038	39,768	91	77,897	17.63	69,080
1969-70 . . .	22,466	44,064	42,771	86	86,921	18.96	81,753

(a) Excludes transfers from one class to another. (b) Includes supplementary assistance and allowances. (c) Includes payments to benevolent homes for maintenance of pensioners. (d) During 1967-68, a reduction of 769 Class 'A' and 233 Class 'B' pensioners was made following the introduction of computer processing in New South Wales. (e) Decrease in average rate due mainly to the increased number of new pensioners who became eligible for part pension as a result of amending legislation approved in April 1967.

For details of training scheme for widow pensioners, see page 399.

**Funeral benefits**

A funeral benefit of up to \$20 is payable to the person who has paid, or is liable to pay, the cost of the funeral of a pensioner. The maximum amount payable is increased to \$40 where a pensioner is liable for the funeral expenses of a spouse, dependent child under 16 years or student child 16 to 21 years, or of another pensioner.

For the purpose of funeral benefits, a pensioner means a person in receipt of an age, invalid or widow's pension or of a tuberculosis, rehabilitation or sheltered employment allowance. It also includes a person who, immediately prior to his or her death was an eligible claimant for such pension or allowance if qualified under the means test in operation before 27 September 1969.

**FUNERAL BENEFITS GRANTED: STATES, TERRITORIES, ETC.,  
1965-66 TO 1969-70  
(Number)**

<i>State, Territory, etc.</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
New South Wales . . . . .	17,015	18,567	17,092	21,830	20,215
Victoria . . . . .	11,354	12,386	12,292	13,897	12,844
Queensland . . . . .	6,596	7,188	7,129	7,930	7,754
South Australia . . . . .	3,751	4,031	4,531	4,855	4,643
Western Australia . . . . .	2,709	3,129	3,151	3,397	3,442
Tasmania . . . . .	1,340	1,347	1,345	1,438	1,437
Northern Territory . . . . .	8	2	7	5	15
Australian Capital Territory . . . . .	92	108	122	136	148
Abroad . . . . .	2	6	3	3	4
<b>Total . . . . .</b>	<b>42,867</b>	<b>46,764</b>	<b>45,672</b>	<b>53,491</b>	<b>50,502</b>

Total cost of funeral benefits granted during 1969-70 was \$1,511,878.

**Maternity allowances**

Maternity allowances are paid to provide financial assistance towards the expenses associated with the birth of children and are additional to the benefits provided under the Commonwealth health scheme. They are not subject to a means test.

A maternity allowance is payable to a woman who gives birth to a child if she resides, or intends to reside permanently in Australia and gives birth to the child in Australia, and to a woman who gives birth to a child on board a ship travelling to Australia if she intends to reside permanently in Australia, provided she receives no benefit similar to a maternity allowance from the country from which she came. A woman who gives birth to a child during a temporary absence from Australia may also be eligible. An alien mother may receive the allowance if she or her husband resided in Australia for at least twelve months immediately prior to the birth of the child, or if she is likely to remain in Australia permanently.

*Rates of allowance.* The allowance is \$30 if the mother has no other children, \$32 if she has one or two children under sixteen, and \$35 if she has three or more other children under sixteen. The amount is increased by \$10 for each additional child born at a birth. An advance payment of \$20 may be made four weeks before the expected date of birth. The balance is payable immediately after the birth. Payment may be made in respect of the birth of a still-born child, or a child which lives for less than twelve hours, if the child had developed for at least five and a half months.



*Claims paid*

**MATERNITY ALLOWANCES: CLAIMS PAID AT EACH RATE  
STATES AND TERRITORIES, ETC., 1969-70**

(Number)

State, Territory, etc.	Multiple births											Total claims paid
	Single births			Twins			Triplets			Quad- ruplets		
	\$30	\$32	\$35	\$40	\$42	\$45	\$50	\$52	\$55	\$60	\$62	
New South Wales .	33,834	39,682	11,990	332	492	187	4	4	..	1	..	86,526
Victoria .	26,892	33,564	11,000	229	397	165	2	7	3	..	..	72,259
Queensland .	13,673	16,204	6,644	102	166	91	1	1	..	..	..	36,882
South Australia .	8,424	10,368	3,000	76	117	44	..	..	2	..	..	22,031
Western Australia	7,682	9,432	2,990	63	90	37	..	..	..	..	..	20,294
Tasmania .	2,921	3,731	1,406	28	32	12	..	..	..	..	..	8,130
Northern Territory	886	989	562	18	7	6	..	..	..	..	..	2,468
Australian Capital Territory .	1,241	1,559	407	13	19	5	1	..	..	..	..	3,245
Abroad .	46	20	2	..	1	..	..	..	..	..	..	69
Total .	95,599	115,549	38,001	861	1,321	547	8	12	5	1	..	251,904

**MATERNITY ALLOWANCES: CLAIMS PAID, AUSTRALIA 1965-66 TO 1969-70**

Year	Number single births	Multiple births	Total claims paid	Amount paid
1965-66 . . . . .	221,889	2,422	224,311	\$'000 7,159
1966-67 . . . . .	226,339	2,446	228,785	7,294
1967-68 . . . . .	228,324	2,452	230,776	7,349
1968-69 . . . . .	248,599	2,688	251,287	7,960
1969-70 . . . . .	249,149	2,755	251,904	8,000

**Child endowment**

A person who is resident in Australia and has the custody, care and control of one or more children under the age of sixteen years or of a full-time student child over sixteen but under twenty-one years, or an approved institution of which children are inmates, is qualified to receive an endowment in respect of each such child. Full-time student children are those receiving full-time education at a school, college or university and who are not in employment or engaged in work on their own account. There are provisions to meet cases of families divided because of divorce, separation, unemployment or death of a parent. There is no means test.

Twelve months residence in Australia is required if the claimant and the child were not born here, but this requirement is waived if the Department of Social Services is satisfied that they are likely to remain in Australia permanently. Where the child's father is not a British subject, endowment is payable if the child was born in Australia, if the mother is a British subject, or if the Department is satisfied that the child is likely to remain permanently in Australia. Under certain conditions, endowment may be paid to Australians who are temporarily absent overseas.

*Rates of endowment.* Since 19 September 1967 the weekly rates have been: children under sixteen years—50 cents for the first or only child in a family; \$1.00 for the second; \$1.50 for the third; and then increases of 25 cents for each subsequent child, making \$1.75 for the fourth, \$2.00 for the fifth and so on. For each eligible student child in a family the rate is \$1.50, which is also the rate payable for each child under sixteen years, or full-time student child in an approved institution.

*Number of claims and endowed children—children under sixteen years.* The number of families receiving child endowment at 30 June 1970 in respect of children under sixteen years was 1,749,734 an increase of 47,820 or 2.81 per cent during the year.

**CHILD ENDOWMENT: CLAIMS AND ENDOWED CHILDREN UNDER 16 YEARS  
STATES, TERRITORIES, ETC., 30 JUNE 1970**

State, Territory, etc.	Family groups			Approved institutions		Total endowed children under 16 years
	Claims in force	Endowed children under 16 years		Number (a)	Endowed child inmates under 16 years	
		Number	Average number per claim			
New South Wales . . . . .	621,621	1,333,330	2.14	130	5,819	1,339,149
Victoria . . . . .	487,592	1,069,440	2.19	120	5,526	1,074,966
Queensland . . . . .	245,418	561,604	2.29	43	2,580	564,184
South Australia . . . . .	165,245	358,421	2.17	59	1,297	359,718
Western Australia . . . . .	140,719	317,904	2.26	70	4,154	322,058
Tasmania . . . . .	56,675	129,853	2.29	23	423	130,276
Northern Territory . . . . .	11,932	28,517	2.39	10	235	28,752
Australian Capital Territory . . . . .	20,257	44,937	2.22	1	35	44,972
Abroad . . . . .	275	584	2.12	..	..	584
Total . . . . .	1,749,734	3,844,590	2.20	456	20,069	3,864,659

(a) All institutions approved for receipt of endowment.

The following table shows, as at 30 June 1970, the number of claims in force and the number of endowed children under sixteen years in family groups, classified according to the number of endowed children in the family group. The families included in the table are not necessarily made up entirely of the children of one marriage, but may include step-children, foster children, adopted children, and any other children in the custody, care and control of the claimant.

**CHILD ENDOWMENT: ENDOWED CHILDREN UNDER 16 YEARS IN FAMILY GROUPS  
TOTAL, 30 JUNE 1970**

Number of endowed children under 16 years in family group	Claims in force	Endowed children under 16 years	Number of endowed children under 16 years in family group	Claims in force	Endowed children under 16 years
1 . . . . .	598,260	598,260	9 . . . . .	1,091	9,819
2 . . . . .	583,453	1,166,906	10 . . . . .	395	3,950
3 . . . . .	333,246	999,738	11 . . . . .	113	1,243
4 . . . . .	147,397	589,588	12 . . . . .	50	600
5 . . . . .	53,857	269,285	13 . . . . .	13	169
6 . . . . .	21,033	126,198	14 . . . . .	5	70
7 . . . . .	7,819	54,733	15 or more . . . . .	2	31
8 . . . . .	3,000	24,000	<b>Total . . . . .</b>	<b>1,749,734</b>	<b>3,844,590</b>

*Number of claims and endowed children—student children sixteen to twenty-one years***CHILD ENDOWMENT: CLAIMS AND ENDOWED STUDENT CHILDREN  
STATES, TERRITORIES, ETC., 30 JUNE 1970**

State, Territory, etc.	Family groups			Approved institutions		Total endowed student children
	Claims in force	Endowed student children  Number	Average number per claim	Number(a)	Endowed student child inmates	
New South Wales . . . . .	74,395	81,585	1.10	22	88	81,673
Victoria . . . . .	65,576	72,856	1.11	28	131	72,987
Queensland . . . . .	16,678	18,352	1.10	14	38	18,390
South Australia . . . . .	19,151	20,794	1.10	15	135	20,929
Western Australia . . . . .	10,495	11,367	1.10	22	172	11,539
Tasmania . . . . .	4,792	5,254	1.10	5	9	5,263
Northern Territory(b) . . . . .	460	503	1.10	..	..	503
Australian Capital Territory . . . . .	3,004	3,403	1.13	..	..	3,403
Abroad . . . . .	25	32	1.30	..	..	32
Total . . . . .	194,576	214,146	1.10	106	573	214,719

(a) Included with approved institutions in first table on page 393.  
direct to Aboriginal families instead of through institutions.

(b) Endowment payments are now being made

**CHILD ENDOWMENT: ENDOWED STUDENT CHILDREN IN FAMILY GROUPS  
TOTAL, 30 JUNE 1970**

<i>Number of endowed student children in family group</i>	<i>Claims in force</i>	<i>Endowed student children</i>	<i>Number of endowed student children in family group</i>	<i>Claims in force</i>	<i>Endowed student children</i>
1 . . . . .	176,023	176,023	4 . . . . .	39	156
2 . . . . .	17,579	35,158	5 . . . . .	2	10
3 . . . . .	933	2,799	<b>Total . . . . .</b>	<b>194,576</b>	<b>214,146</b>

*Liability and expenditure—children under sixteen years***CHILD ENDOWMENT: CHILDREN UNDER 16 YEARS  
LIABILITY AND EXPENDITURE, STATES, TERRITORIES, ETC., 1969-70  
(\$'000)**

<i>State, Territory, etc.</i>	<i>Annual liability at 30 June 1970</i>			<i>Total payments to endowees and institutions during year(a)</i>
	<i>Family groups</i>	<i>Approved institutions</i>	<i>Total</i>	
New South Wales . . . . .	63,687	454	64,141	69,218
Victoria . . . . .	51,940	431	52,371	56,933
Queensland . . . . .	28,208	201	28,409	30,855
South Australia . . . . .	17,135	101	17,236	18,687
Western Australia . . . . .	15,599	324	15,923	17,004
Tasmania . . . . .	6,486	33	6,519	7,006
Northern Territory(b) . . . .	1,500	18	1,518	1,466
Australian Capital Territory . . .	2,169	3	2,172	2,329
Abroad . . . . .	28	..	28	(c)63
<b>Total . . . . .</b>	<b>186,752</b>	<b>1,565</b>	<b>188,317</b>	<b>203,561</b>

(a) See footnote (b) in second table on page 395.  
direct to Aboriginal families instead of through institutions. (c) Includes expenditure for endowed student children; separate figures are not available.



*Liability and expenditure—student children sixteen to twenty-one years*

**CHILD ENDOWMENT: STUDENT CHILDREN, LIABILITY, AND  
EXPENDITURE, STATES, TERRITORIES, ETC., 1969-70**  
(\$'000)

State, Territory, etc.	Annual liability at 30 June 1970			Total payments to endowees and institutions during year
	Family groups	Approved institutions	Total	
New South Wales . . . .	6,364	7	6,371	6,286
Victoria . . . . .	5,683	10	5,693	5,486
Queensland . . . . .	1,431	3	1,434	1,616
South Australia . . . .	1,622	11	1,633	1,600
Western Australia . . . .	887	13	900	890
Tasmania . . . . .	410	1	411	410
Northern Territory . . . .	39	..	39	36
Australian Capital Territory .	265	..	265	259
Abroad . . . . .	2	..	2	(a)
<b>Total . . . . .</b>	<b>16,703</b>	<b>45</b>	<b>16,748</b>	<b>16,582</b>

(a) Included in preceding table showing expenditure for endowed children under sixteen years; separate figures are not available.

*Child endowment summary, 1965-66 to 1969-70*

**CHILD ENDOWMENT: SUMMARY, AUSTRALIA, 1965-66 TO 1969-70**

Year	At end of year							
	Family group claims in force			Total endowed children	Annual liability for endowment (b)	Total payments during year (b)		
	For children under 16 years(a)	For student children(a)	Approved institutions					
1965-66	.	.	1,610,490	132,900	488	3,762,646	\$'000 182,288	\$'000 176,432
1966-67	.	.	1,640,390	151,623	487	3,834,917	185,940	(c)199,282
1967-68	.	.	1,669,629	158,488	491	3,890,853	196,397	187,920
1968-69	.	.	1,701,914	187,500	493	3,996,042	202,034	193,263
1969-70	.	.	1,749,734	194,576	456	4,079,378	205,065	(c)220,143

(a) Claims by families with children under sixteen and student children are shown in both columns. Information on the number of families having such dual claims is not available. (b) A number of endowments are paid every twelve weeks. During two years out of every three there are four such payments but every third year there are five. Figures for annual liability therefore, reflect trends in expenditure on child endowment more accurately than do figures for payments. (c) Expenditure for this year includes five twelve-weekly payments for endowed children under 16 years.

**Unemployment, sickness, and special benefits**

Unemployment and sickness benefits are paid to males over sixteen and under sixty-five years of age, and females over sixteen and under sixty years of age, who are unemployed or who are temporarily incapacitated for work and thereby suffer loss of income. They must have been living in Australia during the preceding twelve months or be likely to remain permanently in Australia. A person receiving an age, invalid or widow's pension, or a service pension (as distinct from a war pension) under the *Repatriation Act* 1920-1970 or a tuberculosis allowance, is ineligible to receive a benefit.

To qualify for an unemployment benefit a person must establish that he is unemployed and that his unemployment is not due to his being a direct participant in a strike, that he is capable and willing to undertake suitable work, and that he has taken reasonable steps to obtain such work. Registration with the local Commonwealth District Employment Office is necessary. To qualify for a sickness benefit, a person must establish that he is temporarily incapacitated for work because of sickness or accident and that he has thereby suffered a loss of salary, wages or other income. A married woman is not eligible to receive a sickness benefit if it is reasonably possible for her husband

to maintain her. Where her husband is able to maintain her only partially, a benefit may be paid at such rate as is considered reasonable in the circumstances. In exceptional cases a married woman may qualify for unemployment benefit in her own right.

A special benefit may be granted to a person not qualified for unemployment or sickness benefit who is not receiving an age, invalid or widow's pension or a service pension, and who, because of age, physical or mental disability or domestic circumstances, or for any other reason, is unable to earn a sufficient livelihood for himself and his dependants. Recipients of special benefits include, among others, persons caring for invalid parents, and persons ineligible for age, invalid or widow's pensions because of lack of residence qualifications.

Special benefits are also paid to migrants who are in Commonwealth centres or hostels awaiting their first placement in employment in Australia. During this time they receive a short instruction in English and in Australian conditions to facilitate their assimilation into the community and employment.

*Rates of benefit.* The maximum weekly rates of unemployment, sickness and special benefit payable and permissible income in respect of benefit periods which commenced on or after 28 September 1970 are as follows.

	Maximum weekly rate \$	Permissible weekly income \$
Adult (21 and over) or married minor . . . .	10.00	6.00
Unmarried person, aged 18-20 years . . . .	6.00	3.00
Unmarried person, aged 16-17 years . . . .	4.50	3.00

The adult rate of benefit is payable to unmarried minors having no parent living in Australia.

An additional benefit of \$7 a week may be paid for a dependent spouse and \$2.50 a week for the first dependent child and \$3.50 for each other dependent child under sixteen years of age resident in Australia. Additional benefit, at the same rate as that for a dependent spouse, may be paid where a woman is keeping house for a claimant who has one or more children under sixteen years of age in his care. It may be granted only if no such benefit is payable for his wife, and the housekeeper is substantially dependent on him but not employed by him.

After six consecutive weekly payments, sickness benefit may be increased to the appropriate long-term rate shown in the table below if the person receiving benefit is not in hospital, or is in hospital but has one or more dependants. The 1970 Budget provided for benefits of \$15.50 per week for adults and married minors and \$10.00 per week for minors. These have since been varied and the rates shown below are those current as from the first payment falling due in April 1971.

	Maximum weekly rate \$	Permissible weekly income \$
Adult (21 and over) or married minor or unmarried minor with no parent in Australia . . . .	16.00	6.00
Unmarried person, aged 16-20 years . . . .	10.50	3.00

Additional benefit for dependants continues at the same rate as ordinary sickness benefit and a supplementary allowance of up to \$2.00 a week may be paid to beneficiaries if they pay rent or pay for board and lodging or for lodging.

The weekly rate of benefit is reduced by the amount by which a beneficiary's other income exceeds the amount of permissible income. For unemployment benefit purposes the income of the spouse is also taken into account unless the claimant and his spouse are permanently separated. For sickness benefit purposes the income from an approved friendly society or other similar approved body in respect of the incapacity for which sickness benefit is payable is disregarded. 'Income' does not include child endowment or other payments for children, Commonwealth hospital and pharmaceutical benefits, a tuberculosis allowance, or an amount paid in reimbursement of medical, dental or similar expenses. There is no means test on property. The supplementary allowance is reduced by the amount by which a beneficiary's other income exceeds \$1.00 a week.

The amount of compensation, damages or similar payment, or war pension, if paid in respect of the same incapacity as that for which sickness benefit is claimed, is deducted from the sickness benefit. If not paid in respect of the same incapacity, compensation is regarded as income and war pension is ignored.

There is a waiting period of seven days during which unemployment or sickness benefit is not payable, but this waiting period is not required more than once in any period of thirteen weeks.

*Benefits*UNEMPLOYMENT, SICKNESS, AND SPECIAL BENEFITS  
STATES AND TERRITORIES, 1969-70(a)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number admitted to benefit during year—									
Unemployment—									
Males . . . . .	19,655	14,597	24,161	10,055	4,345	2,371	270	214	75,668
Females . . . . .	10,707	5,441	9,012	4,933	2,017	1,454	85	66	33,715
Persons . . . . .	30,362	20,038	33,173	14,988	6,362	3,825	355	280	109,383
Sickness—									
Males . . . . .	20,606	12,213	9,139	4,701	4,409	1,796	309	252	53,425
Females . . . . .	5,374	3,469	1,890	1,142	949	398	53	66	13,341
Persons . . . . .	25,980	15,682	11,029	5,843	5,358	2,194	362	318	66,766
Special—									
Ordinary—									
Males . . . . .	619	427	294	86	89	46	4	7	1,572
Females(b) . . . . .	3,256	3,899	1,545	862	728	383	73	64	10,810
Persons . . . . .	3,875	4,326	1,839	948	817	429	77	71	12,382
Migrants—									
Persons . . . . .	5,837	3,854	6	1,050	..	..	..	..	10,747
Total—									
Males(c) . . . . .	40,880	27,237	33,594	14,842	8,843	4,213	583	473	130,665
Females(c) . . . . .	19,337	12,809	12,447	6,937	3,694	2,235	211	196	57,866
Persons(d) . . . . .	60,054	43,900	46,047	22,829	12,537	6,448	794	669	199,278
Persons on benefit at end of year—									
Unemployment—									
Males . . . . .	2,263	2,279	2,140	1,177	598	290	3	9	8,759
Females . . . . .	1,541	814	953	618	205	147	2	4	4,284
Persons . . . . .	3,804	3,093	3,093	1,795	803	437	5	13	13,043
Sickness—									
Males . . . . .	2,793	1,892	1,000	576	400	217	33	37	6,948
Females . . . . .	747	566	205	174	119	46	2	6	1,865
Persons . . . . .	3,540	2,458	1,205	750	519	263	35	43	8,813
Special—									
Ordinary—									
Males . . . . .	177	109	70	21	23	15	1	1	417
Females(b) . . . . .	1,134	1,022	563	270	228	142	12	16	3,387
Persons . . . . .	1,311	1,131	633	291	251	157	13	17	3,804
Migrants—									
Persons . . . . .	183	85	..	65	..	..	..	..	333
Total—									
Males(c) . . . . .	5,233	4,280	3,210	1,774	1,021	522	37	47	16,124
Females(c) . . . . .	3,422	2,402	1,721	1,062	552	335	16	26	9,536
Persons(d) . . . . .	8,838	6,767	4,931	2,901	1,573	857	53	73	25,993
Benefits paid during year—									
Unemployment . . . . . \$'000	2,451	1,795	2,814	1,008	407	360	21	11	8,868
Sickness . . . . . \$'000	2,773	1,956	1,064	576	508	199	34	37	7,146
Special(d) . . . . . \$'000	818	1,074	303	174	123	68	10	7	2,578
Total benefits paid . . . . . \$'000	6,042	4,825	4,181	1,758	1,038	627	65	55	18,592

(a) Excludes a small number of persons receiving unemployment benefits in outlying areas. (b) Since June 1968, special benefits, instead of sickness or unemployment benefits, became payable for confinement cases. (c) Excludes migrants in Commonwealth centres or hostels awaiting their first placement in employment in Australia. (d) Includes migrants in the category described in footnote (c).

UNEMPLOYMENT, SICKNESS, AND SPECIAL BENEFITS: SUMMARY, AUSTRALIA  
1965-66 TO 1969-70

Year	Number admitted to benefit during year			Average number of persons on benefit at end of each week			Amount paid in benefits		
	Unemployment	Sickness	Special (a)	Unemployment	Sickness	Special (a)	Unemployment	Sickness	Special (a)
1965-66 . . . . .	114,497	69,585	7,838	14,927	10,044	2,507	\$'000 7,813	\$'000 6,483	\$'000 1,261
1966-67 . . . . .	151,024	72,276	9,340	20,650	10,108	2,413	11,186	6,611	1,247
1967-68 . . . . .	158,133	72,924	11,615	21,543	9,935	2,532	11,242	6,290	1,300
1968-69 . . . . .	132,914	63,024	(b)21,928	17,818	8,407	(b)4,307	9,268	5,531	(b)2,031
1969-70 . . . . .	109,383	66,766	23,129	13,212	8,572	4,445	8,868	7,146	2,578

(a) Includes migrants in Commonwealth centres or hostels awaiting their first placement in employment in Australia. (b) Since June 1968, special benefits instead of sickness or unemployment benefits, became payable for confinement cases.

**Sheltered employment allowance**

This allowance was introduced on 30 June 1967 as an alternative to an invalid pension. It is available to disabled employees engaged in approved sheltered employment and who are either invalid pensioners or are likely to become permanently incapacitated to a pensionable degree and are otherwise qualified to receive an invalid pension.



The maximum rate of the allowance is the same as the maximum rate of invalid pension. Additional benefits such as wife's allowance and additional pension for children that would be paid if the person were an invalid pensioner are added to the sheltered employment allowance to form one composite payment. The means test is the same as for invalid pensions.

In the year ended 30 June 1970, eight workshops were approved under the *Social Services Act* 1947-1970 to pay sheltered employment allowances on behalf of the Department of Social Services. At 30 June 1970 eleven workshops were paying the allowances to 718 disabled employees. Employees in other sheltered workshops continued to receive invalid pensions. Expenditure during the year 1969-70 was \$435,603.

### Commonwealth Rehabilitation Service

The Commonwealth Rehabilitation Service was set up to help persons who are unable to work because of physical handicap, or who have had to give up their employment because of sickness or injury. It helps disabled persons to reach their maximum physical fitness and to prepare for suitable employment. They are given suitable treatment and training, the cases selected being those in which the person's disability is remediable and there are reasonable prospects of his engaging in a suitable vocation within three years after the commencement of treatment or training.

The service is available to invalid and widow pensioners, persons receiving unemployment, sickness or special benefits, persons receiving tuberculosis allowances, and persons aged fourteen or fifteen who, without treatment and training, would be likely to qualify for an invalid pension on reaching the age of sixteen years. During treatment, payment of pension or benefit continues. When vocational training begins the pension or benefit is suspended and a rehabilitation allowance, together with a training allowance of \$4.00 a week, is paid instead. With an invalid pensioner, or a sickness, unemployment, or special beneficiary, the rehabilitation allowance is equivalent to and calculated in the same manner as an invalid pension. For a widow pensioner the rate is the same as that of the widow's pension.

Living-away-from-home allowances are paid where necessary. Fares and living expenses (including those of an attendant where required) incurred in connection with treatment, training or attendance for an interview or for medical examination may also be paid. Necessary artificial replacements, surgical aids and appliances may be provided, free of charge, to a person receiving treatment and training or who needs them to assist him to engage in a suitable vocation after the discontinuance of his treatment and training or who needs them otherwise to assist in his rehabilitation. He may also be provided with books, equipment and tools of trade costing up to \$80 in any period of twelve months. Where books, equipment and tools of trade provided to assist a person to engage in a suitable vocation are retained by him, he is liable to repay the cost but is not required to make repayment until after he has commenced employment. The repayment may be made by instalments. If the treatment or vocational training does not result in the trainee being able to engage in employment, he receives the pension or benefit to which he is entitled. Disabled persons who cannot qualify for the free service may pay for rehabilitation themselves, or they may be sponsored by government or private organisations.

#### *Numbers dealt with by the service*

#### COMMONWEALTH REHABILITATION SERVICE: AUSTRALIA, 1969-70

Class of beneficiary	Referred	Accepted	Completed training	Placed in employment		Expenditure during year \$'000
				After training (a)	Without training	
Invalid pensioners . . . . .	11,703	378	121	112	215	n.a.
Widow pensioners(b) . . . . .	8	3	..	..	2	
Unemployment and sickness beneficiaries . . . . .	11,439	965	171	157	662	
Special beneficiaries . . . . .	10	1	..	..	..	
Recipients of tuberculosis allowance . . . . .	34	8	2	2	3	
Persons aged 14-15 years . . . . .	129	60	15	14	41	
Persons provided with rehabilitation on payment of the cost by themselves or by another authority . . . . .	123	105	7	7	93	
<b>Total . . . . .</b>	<b>23,446</b>	<b>1,520</b>	<b>316</b>	<b>292</b>	<b>1,016</b>	<b>(b)2,402</b>

(a) Includes persons who had received training prior to 1 July 1969.  
*Scheme for Widow Pensioners* (see page 399).

(b) Excludes widows accepted under the *Training*

Of the 1,520 persons accepted during 1969-70, 75 per cent were under forty years of age. The average number undergoing rehabilitation at the end of each month during the year was 991.

#### Training scheme for widow pensioners

In September 1968 a scheme was introduced to help widow pensioners acquire vocational skills which will enable them to undertake gainful employment. Training may take the form of refresher courses or it may involve training for new skills. During training the widow continues to receive her pension for as long as she remains eligible. In addition to pension, she may qualify for a training allowance of \$4 a week and a living-away-from-home allowance of \$5 a week. The cost of tuition fees and fares may also be met. Of the 1,954 applications received during 1969-70, 1,202 were accepted for training and of this number, 1,136 commenced training. During the year 762 completed training and 439 were placed in employment. Expenditure during the year was \$355,393.

#### Commonwealth assistance to welfare organisations

*The Aged Persons Homes Act 1954-1969* is designed to encourage the provision of homes in which aged persons may reside in conditions approaching normal domestic life.

To be eligible for assistance under the Act an organisation must be:

- (a) carried on otherwise than for the purposes of profit or gain to the individual members; and
- (b) a religious organisation, an organisation of which the principal objects or purposes are charitable or benevolent, an organisation of former members of the defence forces established in every State or a State branch of such an organisation, an organisation approved by the Governor-General for the purposes of the Act, or a local governing body.

An organisation conducted or controlled by, or by persons appointed by, the Government of the Commonwealth or of a State is not eligible for assistance under the Act.

The Director-General of Social Services may make a grant of money to an organisation as assistance towards meeting the cost of the construction or purchase of a home, including land, to be used permanently for the accommodation of aged persons. The grant is made on a basis of \$2 for each \$1 raised by the organisation (\$1 for each \$1 from 1954 to 1957), not counting money which the organisation received from a governmental body (other than a local governing body) or borrowed. Before a grant is made the Director-General must be satisfied that the sum of the money expended and the money at present available for expenditure by the organisation towards the capital cost of the home, together with the amount of the grant, will be not less than the capital cost of the home.

The following table gives information regarding grants approved during 1969-70. The amounts granted include new grants approved in 1969-70 together with adjustments made during the year in respect of grants originally approved in earlier years.

AGED PERSONS HOMES: GRANTS AND AMOUNTS APPROVED, AND BEDS PROVIDED, STATES AND TERRITORIES, 1969-70

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
Grants approved . . .	No.	46	44	31	30	18	14	1	..	184
Amounts . . .	\$'000	3,930	3,616	1,481	1,807	2,019	705	17	..	13,576
Beds provided . . .	No.	930	838	416	445	508	164	4	..	3,305

The following table gives information regarding grants approved for each of the years 1965-66 to 1969-70. The amounts granted in each year include new grants approved in that year together with adjustments made during the year in respect of grants originally approved in earlier years.

**AGED PERSONS HOMES: GRANTS AND  
AMOUNTS APPROVED, AND BEDS PROVIDED  
AUSTRALIA 1965-66 TO 1969-70**

Year	Grants approved		Beds provided
	Number	Amount (\$'000)	Number
1965-66	149	9,576	2,807
1966-67	158	11,095	3,227
1967-68	170	10,220	2,831
1968-69	193	12,704	3,342
1969-70	184	13,576	3,305

Since the commencement of the Act in December 1954, 2,035 grants amounting to \$105,998,324 have been approved, and accommodation has been provided for 35,922 aged persons.

On 12 September 1969 the Aged Persons Homes Act was amended to provide a *Personal care subsidy* of \$5 a week for persons of eighty years of age or over who receive approved personal care while living in hostel type accommodation provided by organisations eligible under the Aged Persons Homes Act. The following table gives details of the premises approved, payments made, and number of residents aged eighty years or over residing in the approved premises, at 30 June 1970.

**AGED PERSONS HOMES GRANTS, PERSONAL CARE SUBSIDY: STATES, 30 JUNE 1970**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number of approved premises	79	95	50	44	29	18	1	1	317
Number of qualified residents	1,393	1,759	1,051	945	492	263	2	1	5,906
Subsidy paid	\$ 282,480	333,180	209,580	173,780	89,020	44,260	200	180	1,132,680

The *Sheltered Employment (Assistance) Act 1967-1970* superseded the *Disabled Persons Accommodation Act 1963*. Under the latter Act, which was in operation from 25 November 1963 to 30 June 1967, total grants of \$372,118 had been approved. The new Act, which came into operation on 30 June 1967 and was amended on 26 October 1970, provides for subsidies of \$2 for \$1 to eligible organisations towards the capital cost of sheltered workshops, the equipment for them, and accommodation for disabled people employed or likely to be employed in sheltered workshops. The Act covers the erection of buildings and the purchase of existing buildings. In both cases the cost of land is included in the capital cost as is the cost of any necessary conversion of an existing building. The subsidy may also be paid towards the rental, for up to three years, where rented premises are used to provide sheltered employment. Organisations eligible for grants under the Act are the same as those specified under the Aged Persons Homes Act.

A substantial number of the people employed in the sheltered workshop must be medically qualified for an invalid pension, or be likely to become so qualified if not provided with sheltered employment, and must receive payment for their work before the organisation can qualify for a subsidy. Since 26 October 1970 a training fee of \$500 has been payable to sheltered workshop organisations in respect of each handicapped person who enters and remains in normal employment for twelve months following a period of at least six months training provided by the organisation. In addition, a subsidy of up to \$1 for \$1 is payable towards the salaries of certain sheltered workshop staff (such as supervisory staff, doctors, social workers and counsellors).

The total subsidy for the 359 grants approved during 1969-70 amounted to \$1,483,217. Of these grants, 36 were for workshop buildings and extensions involving a subsidy of \$901,924. The increased number of grants during the year was due mainly to the greater demand for equipment and, to a lesser extent, to the construction and rental of more workshops. The remaining grants and subsidies approved were divided as follows: 295 grants totalling \$361,662 for workshop equipment; 24 in respect of rental of premises used as sheltered workshops, \$57,543; and 4 grants involving \$162,088 for projects providing accommodation for 44 disabled workshop employees.



*The Handicapped Children (Assistance) Act 1970* came into operation on 17 June 1970. The Act provides for subsidies of \$2 for \$1 to be paid to eligible organisations towards the capital cost of premises to be used for the training of handicapped children; the cost of equipment for such training; and the capital cost of residential accommodation for handicapped children receiving training. Organisations eligible for grants under the Act are the same as those specified under the Aged Persons Homes Act. Although a number of enquiries were received for subsidy under the Act, insufficient time was available for any grants to be made in the period to 30 June 1970.

*The Delivered Meals Subsidy Act 1970* came into operation on 15 April 1970. Its purpose is to help organisations to establish, maintain, expand and improve 'meals-on-wheels' services. The subsidy is at the rate of \$1 for every ten meals provided by approved organisations. At 30 June 1970, 191 organisations had received a total subsidy of \$195,555 under the Act. Organisations eligible for grants under the Act are the same as those specified under the Aged Persons Homes Act.

#### Commonwealth assistance to States

*The States Grants (Deserted) Wives Act 1968* came into operation on 21 June 1968 with retrospective effect from 1 January 1968. The Act provides for assistance to be given by the Commonwealth to the States in respect of aid for mothers with children where there is no bread-winner and the mothers are not eligible for benefits under the Social Services Act. Broadly, these include deserted wives during the first six months of desertion, wives during the first six months of the husband's imprisonment, deserted de facto wives and de facto wives of prisoners, and other unmarried mothers who are ineligible for Commonwealth widows' pension.

The type of assistance attracting a Commonwealth grant may be provided in the form of cash, food or clothing. The grant is made by the Commonwealth to the States on the basis of half the cost of the approved assistance paid to the mother or half the amount of Class A widow's pension whichever is the lesser.

All States, including Victoria which joined in April 1970, are now receiving assistance under the scheme. In 1969-70 payments by the Commonwealth amounted to \$1,882,133 compared with \$1,149,282 during 1968-69.

*The States Grants (Home Care) Act 1969* provides that the Commonwealth will share on a \$1 for \$1 basis with participating States the cost of approved housekeeping or other domestic assistance provided wholly or mainly for aged persons in their homes. The Commonwealth will also share on a \$1 for \$1 basis with participating States up to a maximum of one-third of the capital cost of approved senior citizens' centres as well as meeting on a \$1 for \$1 basis with the States the cost of a salary of a welfare officer employed by such a centre.

Queensland was the only State to receive payment during the year, a grant of \$31,413 being made.

*The State Grants (Dwellings for Aged Pensioners) Act 1969* enables the Commonwealth to make grants, amounting to \$25,000,000 over a 5 year period commencing from 1 July 1969, to the States for the purpose of carrying out approved building schemes in connection with the provision of self-contained accommodation for single aged pensioners and those who qualify for service pensions by reason of age.

#### DWELLINGS FOR AGED PERSONS: ASSISTANCE TO STATES 1969-70

Locality	Expenditure 1969-70	Maximum amount payable under the Act
	\$	\$
New South Wales . . . . .	464,847	10,750,000
Victoria . . . . .	200,000	6,500,000
Queensland . . . . .	..	3,350,000
South Australia . . . . .	160,000	2,000,000
Western Australia . . . . .	..	1,750,000
Tasmania . . . . .	100,000	650,000
<b>Total . . . . .</b>	<b>924,847</b>	<b>25,000,000</b>

**Telephone rental concessions**

Effective from 1 October 1964 an amendment to the Telephone Regulations of the Post and Telegraph Act provided that a telephone service for qualified age, invalid and widow pensioners and blind people is available at an annual rental equal to two-thirds of the amount otherwise payable. The Department of Social Services re-imburses the Postmaster-General's Department for the cost of the scheme including administrative costs. Expenditure during 1969-70 was \$2,224,436, plus administrative costs amounting to \$75,018.

**Compassionate allowances**

These allowances are paid by the Commonwealth on a discretionary basis to certain people who are unable to qualify for pensions or other benefits under the provisions of the Social Services Act. Expenditure on compassionate allowances and payments of a similar nature during 1969-70 was \$60,529.

**Northern Territory and Australian Capital Territory Welfare Services**

Provision of general Welfare services in these two Territories is the responsibility of the Commonwealth. In so far as Welfare items (excluding payments from the National Welfare Fund (*see* pages 384-5)) can be identified for accounting purposes, the following table shows the cost of providing these services for each of the years 1965-66 to 1969-70.

**COMMONWEALTH EXPENDITURE ON GENERAL WELFARE SERVICES(a):  
NORTHERN TERRITORY AND AUSTRALIAN CAPITAL TERRITORY  
1965-66 TO 1969-70  
(\$'000)**

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>Northern Territory—</b>					
Current outlay—					
Net current expenditure on goods and services . . . . .	2,567	3,196	4,237	7,701	10,485
Cash benefits to persons . . . . .	191	214	249	294	324
<i>Total current outlay.</i> . . . .	<i>2,758</i>	<i>3,411</i>	<i>4,486</i>	<i>7,995</i>	<i>10,809</i>
Capital outlay—					
Gross capital formation(b) . . . . .	..	32	48	1,972	4,183
<i>Total outlay</i> . . . . .	<i>2,758</i>	<i>3,442</i>	<i>4,533</i>	<i>9,967</i>	<i>14,992</i>
<b>Australian Capital Territory—</b>					
Current outlay—					
Net current expenditure on goods and services . . . . .	29	32	33	36	37
Cash benefits to persons . . . . .	207	225	292	329	186
<i>Total current outlay.</i> . . . .	<i>236</i>	<i>257</i>	<i>325</i>	<i>365</i>	<i>223</i>
Capital outlay—					
Gross capital formation(b) . . . . .	84	36	..	..	..
<i>Total outlay</i> . . . . .	<i>320</i>	<i>293</i>	<i>325</i>	<i>365</i>	<i>223</i>

(a) Includes expenditure on aboriginal affairs.

(b) Expenditure on fixed assets and increase in stocks.

**Aboriginal welfare**

The Aboriginal population as defined at the 1966 Census of Population and Housing includes persons who, at the Census, stated themselves to be 'Aboriginal', or who stated themselves to be more than half Aboriginal, or who were half Aboriginal and half European. The number enumerated in this group at the 1966 Census was 80,207 persons. This figure excludes Torres Strait Islanders, persons who stated that they were less than half Aboriginal and persons who are half Aboriginal and half non-European. An independent estimate, which includes each of these categories, made by the Commonwealth Office of Aboriginal Affairs set the total Aboriginal population in 1969 at about 140,000 persons. The Aboriginal population is increasing at a rate faster than the Australian average. Few Aborigines still live a nomadic life; most live a settled, but in many other ways traditional, life. There are others at all stages between this and full participation in the life of the Australian community.

A referendum in May 1967 led to the repeal of Section 127 of the Constitution which provided that in reckoning the numbers for census purposes, Aborigines should not be counted; and to the deletion of the words 'other than the Aboriginal race in any State' from Section 51 (xxvi) which relates to the power of the Commonwealth Parliament to make laws with respect to people of any race. The Federal Government, whose aim is to help the Aborigines to become an integral part of Australian community life, now shares with the States power and responsibilities for the advancement of Aborigines. The Commonwealth Government has created an office of Aboriginal Affairs, in Canberra, as the agency co-ordinating policy affecting Aborigines, as well as continuing its financial and administrative responsibilities for Aborigines in the Northern Territory and Australian Capital Territory through the Department of the Interior. The Office serves a Council, comprising a Chairman and two members, which has two functions: to advise in the framing of national policies for the Aboriginal citizens of Australia; and to consult with Commonwealth Departments and authorities whose activities have a bearing on Aboriginal welfare.

In recent years the Commonwealth, State and Northern Territory legislatures have been active in progressively removing all discriminatory legislation from the relevant Acts of the Commonwealth and State Parliaments and from the relevant Ordinances of the Northern Territory, and therefore a number of benefits received by Aborigines are no longer readily identifiable. In the legal and formal sense none of the opportunities open to Australians generally is closed to Aborigines. However the States continue to maintain a number of programmes specifically for the welfare and advancement of Aborigines, and since 1968 the Commonwealth Government has increased its involvement following the establishment of the Office of Aboriginal Affairs. Outlays by Commonwealth and State Authorities specifically relating to Aboriginal affairs are shown for 1969-70 in the following table.

OUTLAY ON ABORIGINAL AFFAIRS BY ALL PUBLIC AUTHORITIES, 1969-70  
(\$'000)

	Common- wealth authorities	State authorities					All public Tas. authorities	
		N.S.W.	Vic.	Qld	S.A.	W.A.		
Net current expenditure on goods and services (including grants to private non-profit organisations)—								
Education . . . . .	371	260	..	90	30	..	7	758
Health . . . . .	..	39	..	30	29	..	..	98
Welfare . . . . .	10,347	147	342	6,013	1,239	1,799	..	19,887
Other . . . . .	360	..	..	..	..	..	..	360
<i>Total</i> . . . . .	11,078	446	342	6,133	1,298	1,799	7	21,103
Gross capital formation—								
Education . . . . .	46	..	..	369	71	263	..	749
Health . . . . .	..	..	..	288	48	75	1	412
Welfare . . . . .	4,395	471	..	675	317	..	..	5,858
Housing . . . . .	251	795	290	1,152	420	1,950	31	4,889
<i>Total</i> . . . . .	4,692	1,266	290	2,484	856	2,288	32	11,908
Cash benefits to persons . . . . .	735	..	357	..	15	477	..	1,584
Grants for private capital purposes . . . . .	300	88	26	..	121	..	..	535
Advances to the private sector . . . . .	363	191	12	..	..	..	..	566
Commonwealth grants—								
Current—								
Education . . . . .	289	-227	-69	-246	-17	-30	-7	..
Health . . . . .	161							
Welfare . . . . .	146							
Capital—								
Education . . . . .	655	-952	-278	-1,809	-518	-1,225	-32	..
Health . . . . .	474							
Welfare . . . . .	140							
Housing . . . . .	3,545							
Commonwealth advances . . . . .	350	..	..	-350	..	..	..	..
Total outlay financed from own resources	22,928	812	680	6,212	1,755	3,309	..	35,696



## STATE EXPENDITURE ON CERTAIN WELFARE SERVICES

The following table shows net expenditure from State government funds on certain welfare services. The figures exclude expenditure on unemployment, bush fire, flood, etc., relief, Aboriginal welfare, and some other items which are excluded because information cannot be obtained for all States. Loan fund expenditure is excluded also. Because of differences in organisation and accounting methods, the information shown for some classes is not on exactly the same basis for all States; it may also be incomplete because particulars of some activities are not separately recorded and are therefore excluded. The expenditure shown is 'net' in the sense that receipts for services rendered have been deducted from gross expenditure.

NET EXPENDITURE BY STATE GOVERNMENTS ON CERTAIN WELFARE  
SERVICES, 1965-66 TO 1969-70  
(\$'000)

<i>Service and year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
1969-70—							
Relief of aged, indigent and infirm, child welfare, etc. . . . .	19,833	14,062	11,704	5,265	8,099	2,010	60,973
Miners' phthisis . . . . .	58	47	..	..	68	..	173
<b>Total . . . . .</b>	<b>19,891</b>	<b>14,109</b>	<b>11,704</b>	<b>5,265</b>	<b>8,167</b>	<b>2,010</b>	<b>61,146</b>
Total—							
1968-69. . . . .	18,308	12,981	9,849	4,691	6,744	1,947	54,520
1967-68. . . . .	16,615	11,277	8,849	4,393	5,860	1,968	48,962
1966-67. . . . .	15,329	10,326	7,679	4,229	5,663	1,664	44,890
1965-66. . . . .	14,037	9,132	6,421	3,662	5,243	1,455	39,950

## CHAPTER 14

### PUBLIC HEALTH

This chapter is concerned with the activities of the Commonwealth Department of Health (including quarantine, national health benefits, and Commonwealth grants for health purposes); activities of the State health departments; statistics of hospitals and nursing homes, hansenite hospitals, and mental health institutions; statistics of notifiable diseases; and cremations. Statistics relating to causes of death are presented in Chapter 8, Vital Statistics (pages 180–5).

Further information about the administration of public health services is contained in the annual reports of the Commonwealth Director-General of Health; the annual reports of the State health authorities; and in the Year Books and Statistical Registers published by the State offices of the Bureau of Census and Statistics. For more detailed statistics of in-patient institutions, see the Bureau of Census and Statistics annual bulletin *Hospitals and Nursing Homes* (Reference No. 16.1).

#### COMMONWEALTH GOVERNMENT ACTIVITIES

At the time of federation the only health function given to the Commonwealth Government under the Constitution was the power to make laws with respect to quarantine. Following on the passing of the *Quarantine Act* 1908 a branch of the Department of Trade and Customs, under the control of a Director of Quarantine, was created on 1 July 1909. The Commonwealth Department of Health was formed in 1921 by the extension and development of the quarantine service, the Director of Quarantine becoming the Director-General of Health. An amendment to the Constitution in 1946 gave the Commonwealth power to make laws with respect to pharmaceutical, hospital and sickness benefits, and medical and dental services. In addition, the Commonwealth Government has used its powers under Section 96 of the Constitution to make grants to the States for health purposes. The Commonwealth Government also gives financial assistance to certain organisations concerned with public health matters. A number of Commonwealth health organisations have been established; detailed information on the functions and operations of these organisations is given in Year Book No. 53, pages 561–6, and in the annual reports of the Commonwealth Director-General of Health.

#### Quarantine

The *Quarantine Act* 1908–1969 is administered by the Commonwealth Department of Health and has three sections of disease control, as follows: (i) human quarantine, which ensures that persons arriving from overseas are free of quarantinable disease; (ii) animal quarantine, which controls the importation of animals and animal products from overseas and the security of other animals present on vessels in Australian ports; and (iii) plant quarantine, which regulates the conditions of importation of all plants and plant products with the object of excluding plant diseases, insect pests and weeds.

In respect of interstate movements of animals and plants, the Act becomes operative only if the Governor-General considers that Commonwealth action is necessary for the protection of any State or States, and in general the administration of interstate movements of animals and plants is left in the hands of the States.

##### Human quarantine

With a few exceptions, which concern persons who have spent at least 14 days in areas adjacent to Australia (eg. New Zealand, the Territory of Papua and New Guinea, Fiji and Lord Howe Island) all passengers and crews arriving in Australia from overseas, whether by air or sea, are subject to medical inspection for the purpose of preventing the introduction of disease into Australia. At the major ports full-time quarantine officers carry out the work, but in the minor ports local doctors act as part-time quarantine officers. In each State, quarantine activities are controlled by the Commonwealth Director of Health, who is a senior medical officer of the Commonwealth Department of Health.

The main concern of the examining officers is to detect cases of the quarantinable diseases smallpox, cholera, yellow fever, plague, and typhus fever. These diseases are not endemic to Australia and it is of great importance to prevent their entry. Quarantine stations at the major ports and at Darwin and Townsville are kept ready for occupation at all times. In addition, persons arriving in Australia and suffering from infectious diseases such as chicken pox, mumps, scarlet fever, and measles are directed to appropriate care and placed in isolation where necessary.

Valid International Certificates of Vaccination are required of travellers to Australia as follows:

*Smallpox.* All arrivals from all countries except American Samoa, Antarctic Territories, Christmas (Indian Ocean), Cocos (Keeling) and Cook Islands, Fiji, French Polynesia, Gilbert and Ellice Islands Colony (including Ocean and Fanning Islands), Hawaii, Lord Howe Island, Nauru, New Caledonia, New Hebrides, New Zealand, Niue and Norfolk Islands, Papua and New Guinea, Solomon and Tokelau Islands, Tonga, Western Samoa, provided travellers have not been outside these areas for at least fourteen days before arrival and that these areas are free from smallpox. Australia reserves the right, in respect of arrivals from other countries, to isolate any person who arrives by air without a smallpox vaccination certificate and refuses to be vaccinated. Children under one year of age are exempt. For passengers arriving in Australia by sea, exemption is granted to infants under twelve months of age and to persons who hold religious convictions against vaccination or who are suffering from a medical condition certified by a medical practitioner to contra-indicate smallpox vaccination.

*Cholera.* All arrivals from locally infected areas and from Burma, Dahomey, Ghana, India, Indonesia, Ivory Coast, Liberia, Mali, Nepal, Niger, Nigeria, Pakistan, Philippines, Sierra Leone, Somalia, Togo, Trucial Sheikdoms and Vietnam. No certificate is required in respect of children under one year of age.

*Yellow fever.* All arrivals from yellow fever endemic zones.

All passengers, whether they arrive by sea or air, are required to give their intended place of residence in Australia, so that they may be traced if a case of disease occurs among the passengers on the aircraft or ship by which they travelled to Australia.

*Isolation.* Under the Quarantine Act, airline and shipping operators are responsible for the expenses of isolation of all travellers who disembark and (i) have come from a cholera infected area, or a cholera area specified above, within 5 days and do not possess a cholera vaccination certificate; or (ii) have come from an endemic zone within 6 days and do not possess a yellow fever vaccination certificate; or (iii) arrive by air without a smallpox vaccination certificate and refuse to be vaccinated on arrival.

The numbers of cases of infectious (non-quarantinable) diseases which were discovered among the passengers and crew of overseas vessels and aircraft calling at Australian ports during 1969-70 and during the preceding four years are shown in the following tables.

HUMAN QUARANTINE: CASES OF INFECTIOUS  
(NON-QUARANTINABLE) DISEASES ON OVERSEAS  
VESSELS AND AIRCRAFT CALLING AT  
AUSTRALIAN PORTS, 1969-70

Disease	Total number of cases of infectious disease
Chicken pox . . . . .	89
Infectious hepatitis . . . . .	21
Measles . . . . .	410
Mumps . . . . .	33
Rubella . . . . .	10
Gastro-enteritis . . . . .	4
Venereal Disease—	
Gonorrhoea . . . . .	} 240
Syphilis . . . . .	
Other . . . . .	
Total . . . . .	807



**HUMAN QUARANTINE: OVERSEAS VESSELS AND AIRCRAFT ARRIVING  
IN AUSTRALIA AND CASES OF INFECTIOUS (NON-QUARANTINABLE)  
DISEASES FOUND, 1965-66 TO 1969-70**

Year	Number of overseas vessels and aircraft cleared		Number of overseas vessels and aircraft on which cases were found	Number of cases of infectious disease	
	Ships	Aircraft		Passengers	Crew
1965-66 . . .	3,488	3,297	201	360	122
1966-67 . . .	4,040	3,918	246	523	172
1967-68 . . .	4,440	4,968	238	312	289
1968-69 . . .	4,813	5,896	184	272	249
1969-70 . . .	5,297	6,887	n.a.	807	

The provisions of the State Health Acts with regard to the compulsory notification of infectious diseases and statistics of cases notified in 1970 are dealt with on pages 425-6 of this chapter.

#### Animal quarantine

Animal quarantine, authorised by the provisions of the *Quarantine Act* 1908-1969, aims at preventing the introduction or spread of animal diseases. It covers the importation of all animals, raw animal products and biological cultures associated with animal diseases, and goods associated with animals.

Of the domesticated animals, only horses, dogs, cats, and poultry are admitted from a limited number of countries depending on diseases being absent in the country of origin. All must be accompanied by health certificates which may include prescribed tests. On arrival in Australia, they are subject to quarantine detention. Zoological specimens are imported into registered zoos, where they remain in permanent quarantine. Circuses are also registered if exotic species of animals are kept. In a similar manner, animals for scientific purposes are imported to approved laboratories. All these premises are kept under constant surveillance. Raw animal products such as hair, types of wool, skins, and hides are specially treated under quarantine control. Such items as raw meat and eggs, which cannot be sterilised, are admitted only from New Zealand. Other items may be treated to destroy any possible infection. Special attention is given to the importation of biological substances of animal origin. The Animal Quarantine Service is also responsible for the health certification of animals for export overseas in accordance with the requirements of the various countries.

The Division of Veterinary Hygiene was created in 1926 to deal with the administration of animal quarantine. The central administration is situated within the Health Department at Canberra, with a director, an assistant director and veterinary officers. The Principal Veterinary Officer of the Department of Agriculture in each State is appointed Chief Quarantine Officer (Animals) of that State, and members of his staff Quarantine Officers (Animals). These State officers carry out the quarantine policy formulated by the central administration. Quarantine accommodation is provided in permanent animal quarantine stations at each State capital.

The Division participates in world-wide international notifications of the more serious contagious diseases of animals and maintains a census of such diseases throughout the world. Information regarding animal diseases and parasites in Australia is also collected and disseminated by means of service publications. Consultation on technical matters is maintained with various scientific institutions. In matters of policy and the quarantine control of imports there is a close liaison with the Department of Customs and Excise.

The Division collaborates with the General and Plant divisions of the quarantine service. Many diseases of animals are communicable to man, and for this reason animal and general quarantine administration are in some respects inseparable. Similarly the interests of animal and plant divisions overlap, many items such as insects, fodder and straw being the subject of combined control.

### Plant quarantine

Since 1 July, 1909 the importation into Australia of all plants or parts of plants, cuttings, seeds, and fruits, whether living or dead, has been subject to an increasingly stringent quarantine with the object of preventing the introduction of insect pests, plant diseases and weeds not yet established in this country. Under the *Quarantine Act* 1908–1969, quarantine inspectors are required to examine all plant material at the first port of entry and to release only material free from diseases and pests. Everyone entering Australia is required to declare if he or she has any plant material in luggage or personal effects. Heavy penalties are laid down for those found evading the regulations. All plant material entering as cargo must also be declared.

When the Commonwealth became responsible for all plant quarantine as applied to the entry of plants and plant material into Australia, the State Governments agreed to co-operate by providing and maintaining inspection facilities and personnel, for which they are reimbursed by the Commonwealth. In 1921 the administration of the regulations came under the newly-formed Department of Health, and in 1927 the Plant Quarantine Branch was created. It is controlled by a director who is responsible for policy and legislation and for co-ordinating the work of the State officers who carry out the detailed administration in their capacity as Commonwealth officers.

Any plant material found carrying diseases or pests, or suspected of doing so, may be ordered into quarantine for remedial treatment. If treatment or return to sender is impracticable, the material may be destroyed. The cost of treatment is met by the importer. Regulations governing the different types of plants are based on the following broad principles. Importation of plants likely to be infected with plant diseases or pests, of noxious plants or fungi, and of poison plants is prohibited. Agricultural seed, not restricted under quarantine legislation, must conform to standards of purity and insect pest and disease freedom. Seed of commercial crops which could introduce diseases are prohibited imports except with special permission. All plant products not specifically restricted, such as timber, logs, crates, furniture and articles containing bamboo, cane and rattan are subject to inspection upon arrival and treatment if necessary. Many commodities, including hops, cotton, peanuts in shell, potatoes, and certain crop seeds, may be imported only by approved importers under specified conditions. All nursery stock, including bulbs, must be grown in post-entry quarantine. Prior approval is necessary, and such material may be imported only by approved importers who are registered for this purpose. The number of plants which may be imported in any one year is limited. The importation of propagating material of commercial fruits, vines, and berries is permitted only after special prior approval and is subject to specific screening for virus by qualified authorities. Soil is a prohibited import, and any vehicles or goods contaminated with soil are required to be thoroughly cleaned, at the expense of the importer, before entry is permitted. (In order to prevent the spread of plant diseases and pests already in Australia, the various State Governments administer plant quarantine regulations under which the movement of certain plant materials or fruits from one State to another or to certain specified districts within a State is controlled.)

Additional information on Australian plant quarantine regulations, including treatments and lists of prohibitions and restrictions, may be obtained from Australian consular offices abroad; the Director of Plant Quarantine, the Commonwealth Department of Health, Canberra in the Australian Capital Territory; or from the Chief Quarantine Officer (Plants) in State Departments of Agriculture.

### Expenditure from the National Welfare Fund on health benefits and services

For particulars of expenditure from all Commonwealth funds, analysed by function and economic type, see Chapter 18, Public Finance. This section deals with Commonwealth expenditure from the National Welfare Fund through which most Commonwealth health benefits and services are financed. The fund is not used to finance the cost of administering the benefits, or of capital works associated with benefits. For a brief description of the operation of this trust fund and details of expenditure from it on social welfare, see Chapter 13, Welfare Services. The following table shows expenditure from the Fund on national health benefits and miscellaneous health services.

COMMONWEALTH EXPENDITURE FROM THE NATIONAL WELFARE FUND  
STATES AND TERRITORIES, 1969-70

(\$'000)

Benefit, service, etc.	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.(a)
<b>National health benefits—</b>									
<b>Pharmaceutical benefits—</b>									
General (b)	28,607	20,744	10,133	6,924	4,950	1,870	(c)	(d)	73,228
To public hospitals	7,858	6,000	3,195	1,828	2,133	739	..	180	(e) 22,422
For pensioners	16,814	9,928	6,492	3,991	2,720	1,125	(c)	(d)	41,069
Hospital benefits	28,718	14,444	8,424	5,830	4,834	1,789	(f)(g) 176	(f)(g) 199	64,415
Nursing home benefits	19,430	10,052	7,636	4,094	4,319	1,393	..	37	46,960
Handicapped children's benefits	199	83	23	96	64	16	4	..	485
<b>Medical benefits—</b>									
Insured patients	22,900	14,610	5,432	7,216	4,978	1,726	(g)	(g)	56,863
Pensioner patients	7,282	4,895	3,030	1,971	1,394	580	8	70	19,230
Tuberculosis Campaign(h)	4,212	3,362	1,913	611	828	369	27	3	11,326
Milk for school children	3,450	2,645	1,569	906	797	466	95	124	10,051
<b>Miscellaneous health services—</b>									
<b>Commonwealth Health</b>									
Laboratories	319	94	867	25	35	117	134	338	1,930
Blood products(i)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	918
Home Nursing Scheme, subsidies to States	295	367	151	53	177	28	..	..	1,071
Radio-active isotopes(j)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	410
Hearing aids(k)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	226
Poliomyelitis and other vaccines(i)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	400
<b>Total health benefits and services</b>	140,157	87,343	48,926	33,560	27,262	10,227	443	958	351,004
<b>Social services</b>	366,094	256,150	154,531	90,631	70,725	31,008	3,646	4,881	(l) 978,385
<b>Other(m)</b>	3,969	4,228	1,983	1,223	590	300	2	116	12,410
<b>Grand total</b>	510,220	347,721	205,440	125,414	98,577	41,534	(n) 4,091	(n) 5,955	1,341,800

(a) Includes expenditure on some items which are not available by State and Territory. (b) Payments to approved chemists, doctors, and private hospitals. (c) Included in the amount shown for South Australia. (d) Included in the amount shown for New South Wales. (e) Includes pharmaceutical benefit payments of \$173,460 for the Royal Flying Doctor and Bush Nursing Services not available by State. (f) Payments on behalf of uninsured and pensioner patients only. (g) Payments to residents of the Northern Territory and the Australian Capital Territory who are insured with a hospital or medical fund are made through organisations registered in the States and are included in the amounts shown for the respective States. (h) Includes allowances paid by the Department of Social Services. (i) Payments to Commonwealth Serum Laboratories to cover costs of processing and production. (j) Costs of purchases by the Commonwealth X-ray and Radium Laboratory, including \$133,000 for purchases made overseas. (k) Purchases of component parts by the Commonwealth Acoustic Laboratories, including \$26,000 for purchases made overseas. (l) Includes \$721,000 paid to residents living abroad. (m) Grants under the *Home Savings Grant Act 1964*, and contributions for losses on rental housing under the *Commonwealth and State Housing Agreement Act 1945*. (n) Incomplete. See earlier footnotes.

In the following paragraphs the function and nature of each of the benefits and services shown in the above table are described.

## National health benefits

## Pharmaceutical benefits

A comprehensive range of drugs and medicines is made available to all persons receiving treatment from a medical practitioner registered in Australia. The benefits are supplied by an approved pharmacist upon presentation of a prescription, or by an approved hospital to patients receiving treatment at the hospital. The patient pays the first 50 cents of the cost of a prescription dispensed by an approved pharmacist, but pensioners who are eligible for treatment under the Pensioner Medical Service (see page 412) receive all benefits without any contribution being made. Special arrangements exist to cover prescriptions dispensed at locations outside the normal conditions of supply, e.g. in remote areas. Total Commonwealth expenditure on pharmaceutical benefits in the year 1969-70 was \$136,718,316.

The following table sets out the number of prescriptions and expenditure on the more frequently prescribed therapeutic preparations under the Pharmaceutical Benefits Scheme for 1968-69 and 1969-70. The expenditure for both years includes patient contributions, which totalled \$21,941,691 in 1969-70. Prescriptions issued free to pensioners are included, and these amounted to \$41,068,702 in 1969-70. Benefits dispensed by hospitals and those covered by special arrangements are not included; these amounted to \$22,421,727 in 1969-70.



**PRESCRIPTIONS DISPENSED UNDER THE PHARMACEUTICAL BENEFITS SCHEME(a)**  
1969 AND 1970

Therapeutic category	Year ended 30 June			
	1969		1970	
	Prescriptions	Expenditure	Prescriptions	Expenditure
	'000	\$'000	'000	\$'000
Broad spectrum antibiotics . . . . .	6,039	16,386	6,395	17,773
Drugs acting on blood vessels . . . . .	3,223	11,514	3,508	12,795
Penicillins . . . . .	4,724	9,929	4,958	11,292
Diuretics . . . . .	2,763	9,634	3,084	10,772
Analgesics . . . . .	4,784	9,630	5,248	10,997
Sedatives and hypnotics . . . . .	6,360	6,480	6,253	6,494
Anti-histamines . . . . .	3,844	6,707	4,355	7,798
Drugs acting on genito-urinary infections . . . . .	1,313	3,758	1,425	4,775
Anti-cholinergics . . . . .	965	3,211	1,046	3,429
Tranquillisers . . . . .	1,019	3,127	1,165	3,708
Antacids . . . . .	2,017	2,750	2,294	3,353
Drugs acting on heart . . . . .	1,284	2,303	1,345	2,418
Anti-diabetics . . . . .	644	2,369	695	2,651
Eye drops . . . . .	1,214	1,947	1,287	2,077
Anti-depressants . . . . .	559	2,085	676	2,455
Anti-convulsants . . . . .	405	1,644	429	1,778
Bronchial spasm preparations . . . . .	1,215	2,157	1,715	3,234
Sulphonamides . . . . .	1,050	1,380	992	1,301
Gastro-intestinal sedatives . . . . .	674	1,249	701	1,295
Iron preparations . . . . .	1,192	1,359	1,309	1,493
Expectorants and cough suppressants . . . . .	1,549	1,301	1,719	1,432
Other therapeutic substances . . . . .	13,571	19,844	14,976	22,918
<b>Total . . . . .</b>	<b>60,408</b>	<b>120,764</b>	<b>65,575</b>	<b>136,238</b>

(a) Excludes benefits dispensed by hospitals and those covered by special arrangements.

**Hospital, Nursing home, and Handicapped children benefits**

Details of the relevant provision of the *National Health Act 1953-1970* and of the benefits available under these schemes are set out in Year Book No. 55, pages 462-464. The hospital and medical insurance provisions were changed in 1969 to allow free insurance under certain circumstances and, from 1 July 1970, these provisions were extended to provide partial assistance with insurance to certain groups of persons. Details of this Subsidised Medical Services Scheme are set out on page 412. From 1 July, 1970 a benefit of \$2 per day is payable to hospitals for patients hospitalised free of charge, whether or not the patient is insured. Contributions to registered hospital benefits funds range from 35 cents to 95 cents per week for a single person and from 70 cents to \$1.90 per week for a married contributor. Total Commonwealth and fund benefits range from \$10.40 to \$26 per day.

*Expenditure on hospital, nursing home, and handicapped children benefits.* The following table shows the amount of these Commonwealth benefits paid during 1969-70. This does not include expenditure on mental hospitals (see page 416).

**COMMONWEALTH HOSPITAL, NURSING HOME, AND HANDICAPPED CHILDREN**  
**BENEFITS PAID: STATES AND TERRITORIES, 1969-70**  
((\$'000)

Type of patient	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Uninsured patients (80c) . . . . .	554	343	848	88	160	46	92	12	2,143
Insured patients (\$2)(a) . . . . .	9,143	5,353	2,472	2,186	1,770	672	(b)	(b)	21,596
Pensioner patients (\$3) . . . . .	9,131	5,331	4,133	2,062	2,246	984	84	187	24,157
Nursing home patients (\$2) . . . . .	12,425	5,617	4,374	(c)2,491	2,610	907	(c)	28	28,453
Intensive care nursing home patients (\$3) . . . . .	7,005	4,434	3,263	(c)1,603	1,708	485	(c)	9	18,507
Handicapped children (\$1.50) . . . . .	199	83	23	96	64	16	4	..	485
<b>Total . . . . .</b>	<b>38,457</b>	<b>21,161</b>	<b>15,113</b>	<b>8,526</b>	<b>8,558</b>	<b>3,110</b>	<b>180</b>	<b>236</b>	<b>95,341</b>

(a) Excludes payments of \$16,063,000 towards special accounts deficits and \$32,547 towards management expenses.

(b) Members who live in the Northern Territory or the Australian Capital Territory, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organisation registered in one of the States, and payments to them are included in the respective States.

(c) South Australia includes Northern Territory.

*Registered hospital benefits organisations.* The following table shows the number of registered hospital benefits organisations, the membership at 30 June 1970, and fund benefits paid during 1969-70. As many persons contribute on behalf of both themselves and their dependants, the total number of persons covered by hospital benefit schemes is considerably higher than the number of members.

#### HOSPITAL BENEFITS: ORGANISATIONS AND FUND BENEFITS, STATES, 1969-70

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Registered organisations at							
30 June 1970(a)	(b)33	37	4	12	8	9	103
Membership at 30 June 1970 '000	1,568	1,208	340	430	330	118	(c)3,996
Fund benefits paid(d) \$'000	53,815	31,753	8,402	12,285	9,454	3,348	(c)119,056

(a) Excludes interstate branches. (b) Includes one organisation registered in the Australian Capital Territory. (c) Members who live in the Northern Territory or the Australian Capital Territory, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organisation registered in one of the States, and payments to them are included in the respective States. (d) Includes \$3,524,354 ancillary benefits, also includes \$424,476 fund benefits reimbursed to the organisations under the Subsidised Medical Services scheme.

#### Medical benefits

A medical benefits scheme has operated since July 1953, being authorised firstly by the National Health (Medical Benefits) Regulations and then by the *National Health Act* 1953-1970. The basic principle of the scheme is Commonwealth support of voluntary insurance towards meeting the costs of medical attention. The benefits under the scheme relate primarily to medical attention on a fee-for-service basis, although provision is made for a Commonwealth subsidy to organisations arranging for medical service on a contract basis.

In order to qualify for a Commonwealth fee-for-service benefit a person is required to be insured with a registered medical benefit organisation. The organisation pays the Commonwealth benefit to the contributor, usually at the time it pays its own benefit. Reimbursement of the Commonwealth benefit is subsequently made to the organisation by the Commonwealth.

On 1 July 1970 the scale of benefits paid was considerably revised and full details of benefits are set out in the schedules to the *National Health Act* 1953-1970. There is one scale of benefits for each State. Weekly contributions to medical benefits funds range from 28 cents to 38 cents for a single person and from 40 cents to 60 cents for a married contributor. The level of benefits has been set so that a contributor is required to pay 80 cents of the 'most common fee' charged for a general practitioner consultation, and up to \$5 for the most costly operations where the 'most common fee' is charged. In fixing the scale of 'most common fees', differential rates have been determined for certain medical services which are customarily performed by either a general practitioner or a specialist.

Contributors who would otherwise be excluded from fund benefits because of organisations' rules covering pre-existing or long-term ailments receive full fund benefits with the Commonwealth re-imbursing the organisations for any deficits incurred in providing benefits in such cases.

Australian residents temporarily absent from Australia who receive medical attention by registered medical practitioners in the country they are visiting are entitled, if insured, to the Commonwealth benefit and the medical fund benefit to which they would be entitled if the service were rendered in Australia.

*Expenditure on medical benefits.* The following table shows the number of registered medical benefit organisations, their membership, the number of medical services rendered to members and their dependants, and payments of Commonwealth benefits and medical fund benefits to members of registered organisations. As many persons contribute on behalf of both themselves and their dependants, the total number of persons covered by medical benefit schemes is considerably higher than the number of contributors. At 30 June 1970 the estimated number of persons covered by contributory medical schemes was 9,442,466.

#### MEDICAL BENEFITS: SUMMARY, STATES, 1969-70

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust(a)
Registered organisations(b)(c)	No. (d)28	19	6	7	8	9	77
Members(c)	'000 1,442	1,128	341	403	323	116	3,753
Medical services	'000 14,960	10,095	4,064	4,714	3,079	1,165	38,076
Commonwealth benefit(e)	'000 21,464	14,386	5,402	7,134	4,832	1,717	54,935
Fund benefit(f)	'000 29,780	17,306	6,416	7,462	5,667	1,919	68,550

(a) Members who live in the Northern Territory or the Australian Capital Territory, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organisation registered in one of the States. (b) Excludes interstate branches. (c) At end of period. (d) Includes one registered in the Australian Capital Territory. (e) Excludes payments of \$1,819,720 towards special accounts deficits, and \$11,794 towards management expenses of the Subsidised Medical Services scheme. (f) Includes \$2,856,691 ancillary fund benefits and also includes \$97,073 fund benefits reimbursed to the organisations under the Subsidised Medical Services scheme.

### Subsidised medical services scheme

As from 1 January 1970 certain low income families; persons in receipt of unemployment, sickness and special benefits under Social Services legislation; and migrants during the first two months after their arrival in Australia, have been eligible for free medical benefits insurance and hospital insurance up to the public ward charge. On 1 July 1970, the Scheme was extended to provide certain families whose incomes are slightly in excess of the eligible limit for free insurance, with health insurance at reduced contribution rates. The income eligibility level for free insurance is currently \$46.50 per week; while families with incomes between \$46.50 and \$52.50 a week pay reduced contributions.

### Pensioner Medical Service

The Pensioner Medical Service, which commenced in 1951, was introduced under the authority of the National Health (Medical Services to Pensioners) Regulations made under the provisions of the *National Health Services Act* 1948-1949. The service has been continued under the provisions of the *National Health Act* 1953-1970.

Persons eligible to receive the benefits of the Pensioner Medical Service are those who receive an invalid or widow's pension, or a sheltered employment allowance, under the *Social Services Act* 1947-1970; or a service pension under the *Repatriation Act* 1920-1970; and who are able to satisfy the means test in force immediately prior to 1 October 1969; and their dependants. Also eligible are persons in receipt of an allowance under the *Tuberculosis Act* 1948, and their dependants.

The benefits provided to eligible persons consist of free medical service of a general practitioner nature such as that ordinarily rendered in the surgery or at the patient's home, including treatment at home following an operation. Specialist services, general anaesthetics, the setting of fractures, and operations are not covered. Patients may be charged a small fee by doctors for travelling and for attendance outside normal surgery or visiting hours. Most general practitioners are enrolled in the scheme and are paid on a fee-for-service basis by the Commonwealth Government.

Qualified persons are entitled to a wide range of medicines without charge at any pharmacy, on presentation of a doctor's prescription. Free hospital treatment is also provided for public ward patients in public hospitals.

At 30 June 1970 the total number of pensioners and dependants enrolled in the Pensioners Medical Service was 1,186,847, while the number of doctors participating in the scheme at that date was 6,451. During 1969-70 doctors in the scheme provided 9,557,026 services (visits and surgery consultations) for persons enrolled in the scheme. For these services they were paid \$19,229,569. The average number of services rendered by doctors to each enrolled person was 8.2.

### Anti-tuberculosis campaign

Under an arrangement with the Commonwealth Government, each State conducts a campaign against tuberculosis. The Commonwealth Government reimburses the State for all approved capital expenditure in relation to tuberculosis, and for net maintenance expenditure to the extent that it exceeds net maintenance expenditure for the year 1947-48. Thus the States carry out the physical or field work of the national campaign and the Commonwealth acts in an advisory, co-ordinating, and financial capacity. For this reason the Commonwealth has not found it necessary to make much use of its powers under Section 6 of the Tuberculosis Act. An advisory council, known as the National Tuberculosis Advisory Council, has been set up. There are twelve members, the chairman being the Commonwealth Director-General of Health.

To help reduce the spread of infection the Commonwealth Government pays allowances to persons suffering from infectious tuberculosis, so that they may give up work and undergo treatment. These allowances have been in operation since 13 July 1950. The rates now payable are: married sufferer with a dependent wife, \$31.75 a week; sufferer without a spouse but with a dependent child or children, \$24.00 a week; dependent child or children under sixteen years of age and full-time student children from sixteen to twenty-one years, \$2.50 a week for the first dependent child and \$3.50 a week for each other dependent child (additional to child endowment); sufferer without dependants, \$19.25 a week (reducible to \$16.00 a week if a person is maintained free of charge in an institution). In addition to the above rates, there may be payable a mother's or guardian's allowance of \$2.00 a week or supplementary assistance of up to \$2.00 a week.

There is a means test on income but not on property. The allowance is reduced by the amount by which a person's income from sources other than his allowance exceeds, in the case of a person receiving the married person rate, \$17.00 a week; a person who is without a spouse or dependent female and is entitled to a 'single person' rate, \$10.00 a week; and a person with a spouse but who is not entitled to a 'married person' rate, \$8.50 a week.



*Commonwealth expenditure.* Expenditure by the Commonwealth Government on its anti-tuberculosis campaign is set out in the following tables. The figures for maintenance include administrative costs, and therefore the totals for allowances and maintenance differ from those shown for the tuberculosis campaign in the National Welfare Fund table on page 409.

**COMMONWEALTH EXPENDITURE ON ANTI-TUBERCULOSIS CAMPAIGN  
STATES AND TERRITORIES, 1969-70**  
(\$'000)

<i>State or Territory</i>	<i>Allowances</i>	<i>Maintenance</i>	<i>Capital</i>	<i>Total</i>
New South Wales . . . . .	262	4,034	191	4,487
Victoria . . . . .	186	3,278	327	3,791
Queensland . . . . .	159	1,764	6	1,929
South Australia . . . . .	60	585	69	714
Western Australia . . . . .	39	856	..	895
Tasmania . . . . .	36	365	..	401
Northern Territory . . . . .	27	..	..	27
Australian Capital Territory . . . . .	2	1	..	3
<b>Australia . . . . .</b>	<b>771</b>	<b>(a)10,882</b>	<b>593</b>	<b>12,246</b>

(a) Includes \$328,891 for administrative costs.

**COMMONWEALTH EXPENDITURE ON ANTI-TUBERCULOSIS  
CAMPAIGN: AUSTRALIA, 1965-66 TO 1969-70**  
(\$'000)

<i>Year</i>	<i>Allowances</i>	<i>Maintenance (a)</i>	<i>Capital</i>	<i>Total</i>
1965-66 . . . . .	1,286	13,586	696	15,569
1966-67 . . . . .	1,193	11,247	499	12,939
1967-68 . . . . .	1,091	11,511	780	13,382
1968-69 . . . . .	921	11,743	847	13,511
1969-70 . . . . .	771	10,882	593	12,246

(a) Includes administrative costs.

### Mass immunisation campaigns

*Poliomyelitis.* An anti-poliomyelitis campaign, using Salk vaccine, was commenced in 1956. This campaign continued until 1967 when, following a recommendation by the National Health and Medical Research Council, a campaign, using Sabin vaccine, was commenced in all States and the Northern Territory and the Australian Capital Territory. The Sabin vaccine is taken by mouth and a course of treatment consists of three doses. These are given at intervals of six to eight weeks.

*Measles.* Early in 1970, as a result of a recommendation by the National Health and Medical Research Council in May 1969, a campaign against measles was commenced in the Australian Capital Territory and the Northern Territory and all States except New South Wales. The vaccine being used is derived from the Schwarz virus strain which is a live attenuated virus. It is administered by intramuscular injection to children in their second year of life. A course of treatment consists of one dose. A total of 216,000 doses was distributed through the Commonwealth Serum Laboratories during 1970.

*Rubella.* In 1969, the National Health and Medical Research Council recommended that the Cendehill rubella vaccine be used in anti-rubella (German measles) campaigns in Australia. Consequently, the Commonwealth agreed to make this vaccine available to the States on the same basis as poliomyelitis and measles vaccines. By December 1970 all States had indicated that they would accept this offer. It is expected that immunisation campaigns will be conducted in all States and the Northern Territory and the Australian Capital Territory during 1971 amongst girls in the twelve to fourteen years age group. The vaccine will also be made available through health departments and, by them, through private practitioners to other women at risk. A course of treatment with rubella vaccine, given intramuscularly, is one dose.

**Free milk for school children scheme**

The *States Grants (Milk for School Children) Act* 1950 was passed with the object of improving the diet of school children by the addition of a small quantity of milk each day. All children under the age of thirteen years attending government or non-government primary schools, including nursery schools, kindergartens, creches and missions for Aborigines, are eligible to receive free milk. The cost of the milk and half the capital or incidental costs, including administrative expenses of the scheme, are reimbursed by the Commonwealth to the States. All States now participate in the scheme. At the end of 1969 approximately 1,870,000 children were entitled to receive free milk under this scheme. Expenditure by the Commonwealth Government during the years 1965-66 to 1969-70 was as follows.

**COMMONWEALTH EXPENDITURE ON MILK FOR SCHOOL CHILDREN SCHEME  
STATES AND TERRITORIES, 1965-66 TO 1969-70**  
(\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1965-66	2,916	2,386	1,259	801	622	408	56	74	8,521
1966-67	3,073	2,394	1,400	860	701	451	77	93	9,049
1967-68	3,357	2,628	1,376	955	853	511	75	106	9,861
1968-69	3,380	2,641	1,549	1,065	800	431	110	109	10,085
1969-70	3,458	2,650	1,570	910	800	476	95	124	10,083

The figures in the foregoing table differ slightly from those in the Welfare Fund table, as they include capital and administrative costs. Figures in the latter table represent only the cost of the milk.

**Miscellaneous health services**

Fifteen *Commonwealth Health Laboratories* have been established under the *National Health Act* 1953-1970, principally in country areas throughout Australia, to provide facilities for investigations into public health and preventive medicine and to assist local medical practitioners in the investigation and diagnosis of disease. The laboratories are situated in the following centres: Albury, Alice Springs, Bendigo, Cairns, Canberra, Darwin, Hobart, Kalgoorlie, Launceston, Lismore, Port Pirie, Rockhampton, Tamworth, Toowoomba, and Townsville. During 1969-70 these laboratories performed 5,029,680 examinations and tests (Nuffield points score system) in respect of 782,992 patients. Administrative costs were \$1,929,535 and expenditure on plant and equipment was \$281,910.

The *Commonwealth Serum Laboratories* are controlled by the Commonwealth Serum Laboratories Commission, which is a body corporate established under the *Commonwealth Serum Laboratories Act* 1961-1970. The main functions of the Commission are to produce and sell prescribed biological products used for therapeutic purposes and to ensure the supply of prescribed essential biological products in accordance with national health needs. These functions include research and development relating to prescribed biological products and allied fields, and the maintenance of potential production capacity for use in emergencies. The Commission is expected under the Act to generate sufficient revenue from the sale of its products to finance its activities relating to prescribed biological products. Certain services, determined by the Minister for Health from time to time, are payable by the Commonwealth. This includes reimbursement for the issue of a wide range of blood products which are processed from whole blood supplied by the Australian Red Cross Blood Transfusion Services and distributed throughout Australia free of charge for medical purposes.

The *Home Nursing Subsidy Scheme*, under the *Home Nursing Act* 1956, provides for a Commonwealth subsidy to assist in the expansion of home nursing activities. Organisations eligible for the subsidy are those which are non-profit making, employ registered nurses, and receive assistance from a State Government, local government body or other authority established by or under State legislation. At 30 June 1970 there were 95 home nursing services in the States employing approximately 850 trained nurses. Commonwealth assistance during 1969-70 was \$1,071,036. Home nursing services in the Northern Territory and the Australian Capital Territory are provided by the Commonwealth Department of Health.

The *Commonwealth X-ray and Radium Laboratory* was originally established in 1929 as the Commonwealth Radium Laboratory, and has served from that time as the Commonwealth centre for radiological physics and as custodian of all Commonwealth-owned radium used for medical purposes. The laboratory's functions have expanded over the years to include the physical aspects

of X-rays; the distribution of all radio-isotopes used in Australia for medical purposes; the maintenance of facilities for radio-chemical investigation; the assay of radioactive substances in the Australian environment; and the maintenance of a whole-body monitor. National standards for the measurement of X-rays and of radio-isotopes are also maintained. The laboratory provides assistance in matters relating to protection against ionising radiations and operates a film-badge service to monitor the radiation exposure of those who work with such radiation. The advisory service on protection has recently been extended to include the hazards associated with the use of microwave and laser radiations. In 1969-70 there were 7,448 deliveries of radio-isotopes, comprising 38 different isotopes, procured for use in medicine and medical research. Of these 6,096 deliveries were obtained from the Australian Atomic Energy Commission. Free issues for medical diagnosis and therapy supplied for patients throughout Australia were 123,381, the cost of \$410,144 being met from the National Welfare Fund. Film badges, numbering 75,103 were processed, assessed, and reported on. The Laboratory also supplies radon to approved hospitals and private practitioners in Australia and New Zealand. In 1969-70, 24,537 millicuries of radon were issued. Administrative costs for 1969-70 were \$313,675 and \$44,492 was expended on plant and equipment.

The *Commonwealth Acoustic Laboratories* were established under the *Acoustic Laboratories Act* 1948 to undertake scientific investigations into hearing and problems associated with noise as it affects individuals. The Laboratories' functions also include research into medical applications of ultrasound and advice to the Armed Forces and Commonwealth Departments and instrumentalities on hearing conservation and the reduction of noise. Audiological services are provided in major centres throughout Australia to assist children, ex-servicemen and pensioners with hearing problems. Hearing aids are supplied and serviced free of charge to persons under 21 years and to pensioners, and their dependants, for a hiring fee of \$10. Hearing aids are also provided and maintained on behalf of the Repatriation and other Commonwealth Departments. During 1969-70 the number of new cases examined at the laboratories was 28,097 including 8,590 children, 5,588 repatriation cases, 918 members of the defence forces, 9,673 pensioners and 1,059 civil aviation referrals; 14,678 calaid hearing aids were fitted and 52,392 were on loan at the end of the year. The cost of supply and maintenance of hearing aids to persons under twenty-one years of age and pensioners was \$225,886. Administrative costs of the laboratories were \$958,593 and expenditure on plant and equipment \$112,762.

### Other Commonwealth health organisations

The *National Health and Medical Research Council* was established in 1936 to replace the National Health Council. Its main functions are to advise Commonwealth and State Governments on all matters of public health legislation and administration, on matters concerning the health of the public, and on medical research. It also advises the Commonwealth and State Governments on the merits of reputed cures or methods of treatment which are from time to time brought forward for recognition. The Council advises the Commonwealth Minister for Health on the application of expenditure from the Medical Research Endowment Fund which was established under the *Medical Research Endowment Act* 1937 to provide assistance to departments of the Commonwealth or of a State engaged in medical research; to universities for the purpose of medical research; to institutions and persons engaged in medical research and in the training of persons in medical research. The Commonwealth makes a triennial appropriation for the Fund, that for 1970 to 1972 being \$6,772,000.

The *School of Public Health and Tropical Medicine* was established in 1930 by the Commonwealth Government at the University of Sydney under an agreement with that University. It provides training for medical graduates and students in public health and tropical medicine in addition to research and consultative activities in these and allied fields. During 1969-70, 6 diplomas were awarded in Public Health and 8 in Tropical Medicine and Hygiene. Costs met by the Commonwealth during 1969-70 were \$590,474 for administration and \$19,771 for plant and equipment.

The *Institute of Child Health* is associated with the School of Public Health at the University of Sydney and with the Royal Alexandra Hospital for Children at Camperdown. Its activities include research into medical and social problems of childhood, undergraduate and post-graduate teaching at the University of Sydney and collaboration with other national and international organisations concerned with child health and disease. Costs of the Institute paid by the Commonwealth during 1969-70 were \$148,166 for administration and \$89,880 for plant and equipment.

The *Commonwealth Bureau of Dental Standards* operates under Section 9 of the *National Health Act* 1953-1970. It is part of the Commonwealth Department of Health and is concerned with research, standards and testing related to dental and allied materials and processes. Its functions include the provision of a consultative service and testing facilities for manufacturers and distributors of dental materials. The number of these products tested during 1969-70 was 250. Expenditure on plant and equipment was \$2,340 and administrative costs were \$55,000.



The *Australian Institute of Anatomy* is administered by the Australian Capital Territory Health Services Office of the Commonwealth Department of Health. Its prime function is to conduct an anthropological museum. Of particular interest in the museum are exhibits dealing with the reproduction of life and a comprehensive national ethnographic collection. Particular emphasis in the displays is placed on the Australian Aborigines. The scientific research work of the Institute is mostly concentrated on problems of nutrition by field surveys of dietary status and laboratory investigation into the biochemistry of nutrition and metabolism.

The *National Biological Standards Laboratory* was set up under the *Therapeutic Substances Act* 1953-1959 which empowers the Commonwealth to ensure that therapeutic substances used for the prevention, diagnosis, and treatment of disease in man and animals are safe, pure, and potent. The *Therapeutic Goods Act* 1966, was proclaimed on 12 November 1970. This Act repealed the *Therapeutic Substances Act* 1953-1959 and extended the Commonwealth's power to cover therapeutic goods such as surgical dressings and containers of substances for therapeutic use. The Commonwealth Director-General of Health is authorised under the Act to set up laboratories to test such substances. Of the 2,930 samples examined by the Laboratory during 1969-70, 416 failed to meet the required standards. In addition, 3,543 safety tests were performed, 24 were failed, and 33 were deferred for further testing. Administrative costs for 1969-70 were \$599,905 and \$73,887 was expended on plant and equipment.

### Commonwealth grants to States

#### Grants for mental health institutions

Following a survey of the mental health facilities and needs in Australia made in 1955, the Commonwealth made an offer of \$20 million to the States as part of a capital expenditure programme of \$60 million on increasing and improving patient accommodation. All States accepted the Commonwealth offer. By 1963 more than three-quarters of the total grant under the *States Grants (Mental Institutions) Act* 1955 had been distributed and the Commonwealth Government announced in November 1963 its intention of continuing assistance to the States towards capital costs on a similar basis, but without overall limit, for a period of three years. In May 1964 the *States Grants (Mental Health Institutions) Act* 1964 was passed to implement that policy. This Act provided for the continuation of Commonwealth aid of \$1 for every \$2 of capital expenditure by the States incurred by or in connection with the building or equipment of mental institutions for the three-year period ending 30 June 1967. With the passing of amending Acts in 1967 and 1970 this period has been extended firstly to 30 June 1970 and then to 30 June 1973. The following table sets out the amounts which have been paid to the State Governments by the Commonwealth Government from 1965-66 to 1969-70.

EXPENDITURE ON MENTAL HEALTH INSTITUTIONS BY THE COMMONWEALTH  
GOVERNMENT: STATES, 1965-66 TO 1969-70  
(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1965-66 . . . . .	1,717	1,567	146	242	338	529	4,539
1966-67 . . . . .	2,217	1,192	288	193	260	823	4,973
1967-68 . . . . .	2,095	1,381	196	63	148	358	4,243
1968-69 . . . . .	1,948	1,200	323	433	375	399	4,678
1969-70 . . . . .	2,282	947	602	1,299	241	108	5,478

There are no mental institutions in the Northern Territory or in the Australian Capital Territory.

#### Paramedical services

The *States Grants (Paramedical Services) Act* 1969 provides for the Commonwealth to share on a \$1 for \$1 basis with participating States the cost of approved paramedical services, such as chiropody, occupational therapy, physiotherapy and speech therapy, provided wholly or mainly for aged persons in their homes.

### Commonwealth grants to organisations associated with public health

In addition to providing the services mentioned on pages 405–16, the Commonwealth Government gives financial assistance to certain organisations concerned with public health. Examples of organisations included in this category are given in the following text. More detailed information on their operations and functions is given in Year Book No. 53, pages 570–3.

*The Commonwealth National Fitness Council* operates under the *National Fitness Act 1941–1969*. Its main function is to advise the Minister for Health concerning the promotion of national fitness. The Act also provides for the establishment of a trust account, known as the National Fitness Fund, to assist in financing the movement. During 1969–70 the Commonwealth's contribution to the Fund was \$416,000, of which \$66,000 was for assistance towards capital expenditure. Expenditure from the Fund during 1969–70 was \$385,456, distributed as follows: State National Fitness Councils, \$270,308; State Education Departments, \$34,000; State Universities, \$24,800; Australian Recreation Leadership Course, \$6,600; capital expenditure on national fitness projects, \$35,456; grants to Australian Capital Territory organisation, \$7,500; and administration, \$6,792.

*The Royal Flying Doctor Service* is a non-profit organisation providing medical services in the remote areas of Australia. It is distinct from, but co-ordinates with, the Aerial Medical Services operated by the Commonwealth Department of Health from Darwin and Alice Springs in the Northern Territory. The Royal Flying Doctor Service is financed mostly from donations and government contributions. During 1969–70 the Commonwealth Government contributed \$350,000, of which \$170,000 was for capital expenditure, and \$180,000 towards operating costs. The Service made 3,451 flights during 1969–70, travelling 1,543,351 miles and transporting 3,751 patients. In the same period medical staff conducted a total of 73,910 consultations and dental treatment was given to 3,676 patients. The radio network of the Service handled 340,761 telegrams.

*The Red Cross Blood Transfusion Service* is conducted by the Australian Red Cross Society throughout Australia. The operating costs of the service in the States are met by the State Governments paying 60 per cent; the Commonwealth, 30 per cent; and the Society, 10 per cent. In the Northern Territory and Australian Capital Territory the Commonwealth pays 90 per cent and the Society 10 per cent. Commonwealth expenditure for each State and Territory during 1969–70 was as follows: New South Wales, \$166,158; Victoria, \$224,817; Queensland, \$154,476; South Australia \$82,609; Western Australia, \$75,633; Tasmania, \$21,142; Northern Territory, \$18,300; and the Australian Capital Territory, \$10,797, making a total of \$753,932 compared with \$765,272 for 1968–69.

*Lady Gowrie Child Centres* were established in 1940 by the Commonwealth Government in each of the six State capitals. The functions of these centres include specialised demonstration and research relating to problems of physical growth and nutrition, physical and mental development, and also to test and demonstrate methods for the care and instruction of the young child. The centres are administered by local committees under supervision of the Australian Pre-school Association and are financed mainly by Commonwealth grants. The Commonwealth contribution for 1969–70 was \$150,000 for the Centres and \$18,800 for the Australian Pre-school Association.

*The National Heart Foundation of Australia* is a private national organisation established to promote research in cardiovascular disease, to rehabilitate heart sufferers and to foster the dissemination of information about heart diseases. Formed in 1960, as a result of a public appeal yielding \$5 million to which the Commonwealth Government contributed \$20,000, the Foundation has its headquarters in Canberra. From its inception to the end of 1970 the Foundation has allocated more than \$4 million for grants-in-aid towards research in university departments, hospitals and research institutes; research fellowships tenable in Australia and overseas; and overseas travel grants. Most of the annual expenditure of about \$700,000 is devoted to supporting research into cardiovascular disease.

*The World Health Organization (WHO)* is a specialised agency of the United Nations and is concerned with the attainment of the highest possible level of health by all people. WHO provides consultative services; assists in the training of national health personnel; examines all aspects of health including preventive and curative medicine and research; sets standards for food, biological products and chemicals; and determines Regulations for the control of communicable diseases. Australia was represented at the Twenty-third World Health Assembly held at Geneva in May 1970, and at the Twenty-first Western Pacific Regional Committee Meeting at Manila in September 1970. The Commonwealth contribution to WHO during 1969–70 was \$814,994, which included a grant of \$3,000 to the Commonwealth Serum Laboratories for WHO influenza research.

*The International Agency for Research on Cancer* was established by the World Health Organization, and participation by Australia was approved by the Government in 1965. The objectives of the Agency are to promote international collaboration in cancer research and to provide a means through which countries and interested organisations may co-operate in the stimulation and support of research into cancer. The Commonwealth contribution to the Agency in 1969–70 was \$134,892.

## STATE GOVERNMENT ACTIVITIES

(Includes activities of the Commonwealth Government in the Northern Territory and the Australian Capital Territory)

### Public health legislation and administration

For details of the administration of health services in each State, the Northern Territory, and the Australian Capital Territory, see pages 543–50 of Year Book No. 53. For administrative changes which took place in 1969, see page 431 of Year Book No. 56. The following paragraphs refer briefly to recent administrative changes.

In *New South Wales* several pilot schemes have been conducted in the field of health education to help determine the type and effectiveness of health education programmes for community youth. Expanded programmes are now being organised. A team has been formed to undertake a co-ordination service for drug dependence. Its first task has been to establish the size of the problem and the services in existence in New South Wales.

The Clean Waters Act assented to on 9 December 1970, is aimed at the prevention or reduction of pollution of waterways of the State. During the past year the Waste Disposal Act was introduced providing for the establishment of the Metropolitan Waste Disposal Authority, and the State Pollution Control Commission Act was also introduced. The Government has agreed to the establishment of a Central Cancer Registry within the organisation of the Department and the necessary amendments were made to the Public Health Act for this purpose. The Pure Food Act was also amended to increase certain penalties for offences under that Act and also to provide for prohibiting the use of food stores, food vehicles, and certain appliances that are in an unclean or insanitary condition.

In order to assist with the planning for complete regionalisation of hospital services, the Hospitals Commission has tentatively allocated all public hospitals in the State to regions. Regional offices are now established and fully functioning in six regions. It is anticipated that regional offices will be established next in the Metropolitan Southern Region, and the South Coast and Southern Tablelands Region.

In *Victoria*, the introduction of a new Branch, namely the Alcoholics and Drug-dependent Persons Services Branch, followed the passing of the *Alcoholics and Drug-dependent Persons Act* 1968. Health Education, and in particular drug education facilities, are being expanded under a Commonwealth-State agreement. The *Medical Act* 1970 introduced annual registration of medical practitioners and a Register of Specialist Practitioners. The *Environment Protection Act* 1970, whilst not administered by the Department of Health, has strong public health implications. Provision is made for licences to discharge wastes to the environment to be issued and periodically reviewed in accordance with State environment protection policy for the particular segment of the environment. Any such licence will not be issued, or if already issued will be revoked, if the public health is likely to be threatened.

In *Queensland* the *Tuberculosis Further Agreement Act* 1969 was introduced which provided for the continuance in Queensland of Commonwealth services for the diagnosis, treatment and control of tuberculosis for five years from 1 July 1968. The *Clean Air Act* of 1963 was amended to bring it into line with similar legislation in other States. Amendments to *The Ambulance Services Act* of 1967 provide for extension of ambulance services. The *Radioactive Substances Act* of 1958 was amended to enable a person other than a medical practitioner or a dentist to apply for a licence to have an irradiating apparatus in his possession for diagnostic purposes only.

### Supervision and care of infant life

Because the health of mothers and infants depends largely on pre-natal attention as well as after-care, government, local government and private organisations provide instruction and treatment for mothers before and after confinement. The health and well-being of mother and child are looked after by infant welfare centres, baby clinics, creches, etc.

In all States, Acts have been passed with the object of supervising the conditions of infant life and reducing the rate of mortality. (Information about infant mortality will be found in Chapter 8, Vital Statistics.) Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons.



Under the provisions of the *Social Services Act* 1947-1970 maternity allowances provide financial assistance towards the expenses associated with the birth of children. Information about maternity allowances is given in Chapter 13, Welfare Services.

### Nursing activities

Several State Governments maintain institutions which provide treatment for mothers and children and, in addition, subsidies are granted to various associations engaged in welfare work.

*Infant welfare centres.* The following table gives particulars of the activities of infant welfare centres for the year 1970. The figures relate to all centres, whether permanently staffed or on a temporary or part-time basis. Centres may be located at accommodation specially provided for this purpose, or at halls, schools, etc.

INFANT WELFARE CENTRES: STATES AND TERRITORIES, 1970

	N.S.W.	Vic.	Qld(a)	S.A.(a)	W.A.	Tas.	N.T.(a)	A.C.T.	Aust.
Number of centres(b)	442	727	312	285	175	111	20	36	2,108
Attendances at centres	1,126,681	1,560,805	523,927	286,768	273,368	148,971	27,075	63,311	4,010,906
Visits by nurses to homes	46,810	157,560	2,305	35,554	31,375	72,650	8,425	10,744	365,423
Visits by nurses to hospitals	57,403	26,482	31,912	n.a.	19,919	n.a.	1,551	52	n.a.

(a) Year ended 30 June 1970. (b) At end of year.

Mobile units are used to service centres in some States. In 1970, the numbers of units and centres served, included in the above table, were as follows: Victoria, 4 and 11; Queensland, 3 and 35; South Australia, 2 and 20; Western Australia, 4 and 42. The number of centres for Tasmania includes 13 areas visited by sisters in cars.

Since 1930, the number of attendances at the infant welfare centres has increased more than four-fold. The numbers of attendances at ten year intervals since 1930 were as follows: 1930, 919,893; 1940, 2,035,299; 1950, 3,049,375; 1960, 3,482,383; and 1970, 4,010,906.

*Bush Nursing Associations.* Treatment for mothers and children is also provided by the Bush Nursing Associations. The numbers of centres maintained by the Associations in 1970 were: New South Wales, 16; Victoria, 58; Queensland, 5; South Australia, 33; and Western Australia, 19. In Tasmania, all of the district nursing centres have been taken over by the nearest public hospital and are no longer distinct entities.

## Medical and dental inspection of school children

For details of the administration of school health services in each State, the Northern Territory, and the Australian Capital Territory, see Year Book No. 55, pages 458-61. Further information about the operation of the school medical and dental services is given in State Year Books. The following paragraphs summarise features common to most States.

Medical and dental inspection of school children is carried out in all States under the control of State health departments, and in the Northern Territory and the Australian Capital Territory under the control of the Commonwealth Department of Health. The school health services are available to both government and non-government schools in metropolitan areas and larger country towns. In some States, special arrangements are made for children attending schools in more remote country areas.

The aim of the school medical services is to medically examine all children at least once during their school careers, usually on entry into primary school. Review examinations or, in some States, tests of vision and hearing by school nurses, are conducted in upper-primary and lower secondary grades. Parents or guardians are notified of any departure from normal health and advised to seek further attention if necessary.

The aim of the school dental services is to examine and give regular dental treatment to children. Usually, acceptance for treatment is limited to children in primary schools. Some school children are treated at hospital dental clinics. Aboriginal missions and orphanages are also visited by school dentists. The consent of a parent or guardian is necessary before treatment can be given. In some States, priority is given to children who live in areas beyond the easy reach of other dental services. Treatment in remote areas is facilitated by the use of travelling dental clinics.

The following table summarises school health services in the States and Territories. Uniform concepts and definitions, have not been developed, so Australian totals have not been shown.

SCHOOL HEALTH SERVICES: STATES AND TERRITORIES, 1970

	N.S.W.	Vic.	Qld(a)	S.A.	W.A.	Tas.	N.T.(a)	A.C.T.
School medical services—								
Staff (b)—								
Medical officers	76	40	4	12	7	12	4	3
School nurses	87	44	30	15	16	30	7	3
Medical examinations—								
Children examined	201,776	218,811	116,130	(c)102,806	66,570	(c)28,721	(d)11,883	(d)17,926
Found with defects	26,794	n.a.	7,783	(c)16,378	11,938	7,167	(e)1,000	1,456
School dental services—								
Number of dental clinics—								
Stationary	9	3	..	14	11	27	..	26
Mobile	(f)19	12	(g)4	6	4	23	n.a.	1
Staff(b)—								
Dental officers	33	35	17	18	14	24	n.a.	16
Dental assistants and nurses	39	42	..	28	10	47	n.a.	26
Dental examinations—								
Children examined	102,163	34,785	(h)26,328	17,593	(i)1,709	45,868	17,254	16,049
Number treated	19,838	26,678	(h)8,666	11,831	(i)880	n.a.	n.a.	13,283

(a) Year ended 30 June 1970. (b) Full-time and part-time. (c) Excludes some children tested for hearing and vision by school sisters. (d) Includes pre-school children. (e) Estimated. (f) There is also a dental team with the Royal Flying Doctor Service (based at Broken Hill). (g) In addition, portable dental equipment is possessed by 13 dental officers who function from departmental vehicles. (h) Only children who reside in more remote areas. (i) The School Dental Service which in the past provided free dental treatment for school children is being phased out. In 1969 a service for primary school children providing inspections only was introduced. During 1970, 45,567 children were inspected and 24,370 found in need of treatment.

## HOSPITALS AND OTHER STATISTICS

This section provides statistical information on hospitals and nursing homes; notifiable diseases; a survey of chronic illnesses and impairments; and cremations. The institutions referred to under this heading are classified into the following groups: public hospitals and nursing homes; private hospitals and nursing homes; repatriation hospitals; hansenide hospitals; and mental health institutions. Statistics of quarantine stations, and of hospitals maintained by the Armed Services, are not included.

### Public hospitals and nursing homes

The statistics shown for public hospitals and nursing homes refer to the following institutions: *New South Wales*—all institutions which are under the authority of the New South Wales Hospitals Commission, and which receive a government subsidy during the year, and the six State hospitals and nursing homes under the control of the Department of Public Health; *Victoria*—all subsidised hospitals and subsidised hospitals for the aged under the authority of the Victorian Hospitals and Charities Commission, two tuberculosis sanatoria, and the Peter MacCallum Clinic, but not the exotic diseases block at the Fairfield Hospital; *Queensland*—all hospitals controlled by the State Government or by the State hospital boards, including some institutions for out-patients or first-aid treatment only and some other hospitals which provide public accommodation in the form of public wards or designated public beds; *South Australia*—all hospitals controlled and maintained by, or which receive a regular annual grant or subsidy for maintenance purposes from, the South Australian Government, and hospitals controlled and maintained by local government or semi-government authorities; *Western Australia*—all departmental and subsidised board hospitals, including the Perth Dental Hospital; *Tasmania*—all public hospitals designated as such by the Director-General of Health Services, together with three homes for the aged, and one chest hospital; *Northern Territory*—departmental hospitals at Darwin, Alice Springs, Tennant Creek, and Katherine; *Australian Capital Territory*—the Canberra Hospital and the Queen Elizabeth II Coronation Home for post-natal care.

A number of institutions classified by the Commonwealth Department of Health as 'public' hospitals or nursing homes are not included in the statistics of public hospitals and nursing homes: there were 100 such institutions at June 1969, with an approved bed capacity of 4,177.

## Number, staff and accommodation

## PUBLIC HOSPITALS AND NURSING HOMES: NUMBER, STAFF AND ACCOMMODATION, STATES AND TERRITORIES, JUNE 1969

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number of hospitals and nursing homes . . . . .	269	158	146	66	98	25	4	2	768
Medical staff—									
Salaried . . . . .	1,501	1,457	905	358	264	165	27	27	4,704
Other(a) . . . . .	5,659	2,300	197	692	395	167	..	190	9,600
Nursing staff(b) . . . . .	20,489	14,513	7,020	5,251	4,651	2,232	443	737	55,336
Accommodation—									
Number of beds and cots . . . . .	27,953	17,410	13,655	5,048	6,857	3,073	619	627	75,242

(a) Includes honorary and visiting medical officers who may hold appointments at more than one hospital.  
 (b) Qualified and student nurses, assistant nurses, assistant nurse trainees, nursing aides, and nursing aide trainees.

## In-patients treated

The following table gives particulars of in-patients treated. The figures shown refer to cases, that is to say, a person who is admitted to hospital or nursing home twice during a year is counted twice. Newborn babies are excluded unless they remain in hospital or nursing home after their mothers' discharge.

## PUBLIC HOSPITALS AND NURSING HOMES: IN-PATIENTS TREATED STATES AND TERRITORIES, 1968-69

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
In-patients at beginning of year—									
Males . . . . .	9,683	n.a.	3,799	1,555	2,204	917	227	n.a.	n.a.
Females . . . . .	11,723	n.a.	4,954	1,981	2,596	1,188	218	n.a.	n.a.
Persons . . . . .	21,406	13,249	8,753	3,536	4,800	2,105	445	479	54,773
Admissions and re-admissions during year—									
Males . . . . .	245,857	n.a.	116,625	58,154	63,280	18,179	7,012	n.a.	n.a.
Females . . . . .	360,424	n.a.	147,556	71,174	77,705	26,978	8,074	n.a.	n.a.
Persons . . . . .	606,281	351,213	264,181	129,328	140,985	45,157	15,086	19,994	1,572,225
Total in-patients (cases) treated—									
Males . . . . .	255,540	n.a.	120,424	59,709	65,484	19,096	7,239	n.a.	n.a.
Females . . . . .	372,147	n.a.	152,510	73,155	80,301	28,166	8,292	n.a.	n.a.
Persons . . . . .	627,687	364,462	272,934	132,864	145,785	47,262	15,531	20,473	1,626,998
Discharges and deaths—									
Males . . . . .	245,829	n.a.	116,520	58,037	63,264	18,138	6,957	n.a.	n.a.
Females . . . . .	359,959	n.a.	147,489	71,061	77,456	26,945	8,046	n.a.	n.a.
Persons . . . . .	605,788	350,704	264,009	129,098	140,720	45,083	15,003	19,904	1,570,309
In-patients at end of year—									
Males . . . . .	9,711	n.a.	3,904	1,672	2,220	958	282	n.a.	n.a.
Females . . . . .	12,188	n.a.	5,021	2,094	2,845	1,221	246	n.a.	n.a.
Persons . . . . .	21,899	13,758	8,925	3,766	5,065	2,179	528	569	56,689
Average daily number resident	21,158	13,288	8,610	3,575	4,873	2,100	466	530	54,600

In addition to those admitted to the hospitals and nursing homes, there are large numbers of out-patients treated. During 1968-69 there were approximately 1,939,000 out-patients treated in New South Wales, 877,000 in Victoria, 1,001,000 in Queensland, 178,000 in South Australia, 340,000 in Western Australia, 143,000 in Tasmania, 149,000 in the Northern Territory (includes two clinics), and 29,000 in the Australian Capital Territory, making an estimated total for Australia of 4,656,000. The figures quoted refer to cases, as distinct from persons and attendances.

## Revenue and expenditure

Details of revenue and expenditure for the year 1968-69 are shown in the next table. 'Government aid' includes municipal aid which was shown as a separate revenue item for some States in previous Year Books. Commonwealth pharmaceutical benefits and tuberculosis allowances paid direct to the institutions have also been included as 'government aid'.



Commonwealth hospital and nursing home benefits paid direct to public hospitals and nursing homes (in either full or part payment of fees incurred by pensioners and other uninsured patients) are treated on the same basis as Commonwealth benefits used to reimburse insured patients, and included in the amounts shown for 'fees'. Details of Commonwealth expenditure on each of the different categories of hospital benefits are shown on pages 410-11.

For some States, expenditure on capital items out of hospitals' own funds are not included in the figures shown. Comparison between the States should therefore be made with caution.

**PUBLIC HOSPITALS AND NURSING HOMES: REVENUE AND EXPENDITURE  
STATES AND TERRITORIES, 1968-69  
(\$'000)**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Revenue—</b>									
Government aid . . . . .	105,160	66,080	(a)40,073	23,581	32,583	13,028	3,921	3,047	287,473
Public subscriptions, legacies, etc. . . . .	167	(b)7,020	197	556	16	5,083	606	1,859	7,956
Fees . . . . .	68,617	42,199	11,857	11,678	14,682	36	..	85	156,581
Other . . . . .	2,011	2,449	4,964	1,250	1,313	..	..	..	12,107
<b>Total revenue . . . . .</b>	<b>175,954</b>	<b>117,748</b>	<b>57,091</b>	<b>37,064</b>	<b>48,595</b>	<b>18,147</b>	<b>4,527</b>	<b>4,991</b>	<b>464,117</b>
<b>Expenditure—</b>									
Salaries and wages . . . . .	108,497	71,093	31,187	19,323	24,330	10,046	2,742	3,114	270,332
Upkeep and repair of buildings and grounds . . . . .	4,745	2,657	1,869	1,229	4,129	248	281	290	15,448
All other maintenance . . . . .	44,992	27,511	17,727	9,783	13,397	4,075	1,337	1,298	120,120
<b>Total maintenance . . . . .</b>	<b>158,234</b>	<b>101,260</b>	<b>50,783</b>	<b>30,335</b>	<b>41,855</b>	<b>14,369</b>	<b>4,360</b>	<b>4,702</b>	<b>405,899</b>
Capital . . . . .	18,096	13,863	5,107	6,411	6,707	3,980	167	164	54,494
<b>Total expenditure . . . . .</b>	<b>176,330</b>	<b>115,123</b>	<b>55,890</b>	<b>36,746</b>	<b>48,562</b>	<b>18,349</b>	<b>4,527</b>	<b>4,866</b>	<b>460,393</b>

(a) Excludes loans from semi-government authorities; these loans are included in 'other' revenue. (b) Includes transfers from hospital reserve accounts.

### Summary for Australia

A summary of statistics relating to public hospitals and nursing homes in Australia is given in the following table.

**PUBLIC HOSPITALS AND NURSING HOMES: AUSTRALIA, 1964-65 TO 1968-69**

	<i>1964-65</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>
<b>Hospitals and nursing homes . . . . .</b>	<b>761</b>	<b>766</b>	<b>765</b>	<b>762</b>	<b>768</b>
<b>Medical staff—</b>					
Salaried . . . . .	3,674	3,967	4,125	4,487	4,704
Other(a) . . . . .	8,389	8,824	18,724	19,249	9,600
<b>Nursing staff(b) . . . . .</b>	<b>45,244</b>	<b>47,656</b>	<b>49,640</b>	<b>52,236</b>	<b>53,336</b>
<b>Beds and cots . . . . .</b>	<b>70,043</b>	<b>71,226</b>	<b>73,748</b>	<b>74,768</b>	<b>75,242</b>
<b>Admissions . . . . .</b>	<b>1,364,077</b>	<b>1,395,519</b>	<b>1,439,959</b>	<b>1,500,662</b>	<b>1,572,225</b>
<b>Total in-patient (cases) treated . . . . .</b>	<b>1,416,388</b>	<b>1,447,900</b>	<b>1,494,709</b>	<b>1,554,331</b>	<b>1,626,998</b>
<b>Average daily number resident . . . . .</b>	<b>49,732</b>	<b>50,161</b>	<b>52,331</b>	<b>53,467</b>	<b>54,600</b>
<b>Out-patients (cases)(c) . . . . .</b>	<b>3,579,000</b>	<b>3,820,000</b>	<b>3,993,000</b>	<b>4,365,000</b>	<b>4,655,843</b>
<b>Revenue . . . . .</b>	<b>\$'000 310,687</b>	<b>341,741</b>	<b>376,343</b>	<b>413,183</b>	<b>464,117</b>
<b>Expenditure . . . . .</b>	<b>\$'000 309,434</b>	<b>341,007</b>	<b>377,457</b>	<b>411,869</b>	<b>460,393</b>

(a) Includes honorary and visiting medical officers, who may hold appointments at more than one hospital.

(b) Qualified and student nurses, assistant nurses, assistant nurse trainees, nursing aides, and nursing aide trainees.

(c) Estimated.

### Private hospitals and nursing homes

The figures shown in the following table refer to those private hospitals and nursing homes which have been approved for the payment of Commonwealth hospital benefits under the *National Health Act* 1953-1970. A small number of institutions classified as 'private' by the Commonwealth Health Department are included in public hospital statistics, and these have been omitted from the following two tables. Statistical information about patients, staff and finance of these institutions is not available on a uniform Australia-wide basis.

**PRIVATE HOSPITALS AND NURSING HOMES: STATES, 1965 TO 1969**

<i>30 June—</i>					
<i>State</i>	<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>
<b>NUMBER OF PRIVATE HOSPITALS AND NURSING HOMES</b>					
New South Wales . . .	531	527	535	541	536
Victoria . . . . .	306	309	313	310	311
Queensland . . . . .	146	149	152	155	156
South Australia(a) . . .	176	177	184	185	187
Western Australia . . .	91	95	96	102	104
Tasmania . . . . .	42	45	42	43	44
<b>Australia . . . . .</b>	<b>1,292</b>	<b>1,302</b>	<b>1,322</b>	<b>1,336</b>	<b>1,338</b>
<b>NUMBER OF BEDS FOR PATIENTS</b>					
New South Wales . . .	13,626	14,503	15,825	17,016	18,377
Victoria . . . . .	6,797	7,117	7,295	7,267	7,385
Queensland . . . . .	4,362	4,416	4,630	4,908	5,117
South Australia(a) . . .	4,081	4,166	4,361	4,542	4,778
Western Australia . . .	2,846	2,898	3,029	3,333	3,484
Tasmania . . . . .	982	1,033	1,038	1,084	1,160
<b>Australia . . . . .</b>	<b>32,694</b>	<b>34,133</b>	<b>36,178</b>	<b>38,150</b>	<b>40,301</b>

(a) Includes one institution in the Northern Territory.

There were no institutions of this nature in the Australian Capital Territory in 1969.

**Repatriation hospitals**

The medical care of eligible ex-servicemen and dependants of deceased ex-servicemen is a major function of the Commonwealth Repatriation Department, which provides a comprehensive service.

In-patient treatment is provided at Repatriation General Hospitals in each capital city, at six auxiliary hospitals and at one sanatorium. In-patient treatment may also be provided in country hospitals at the Department's expense in certain circumstances. Mental patients requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Department in mental hospitals administered by the State authorities.

Details of patients, staff and expenditure on Repatriation institutions and other medical services are given in Chapter 5, Repatriation.

**Hansenide hospitals**

There are four isolation hospitals in Australia for the care and treatment of persons suffering from Hansen's disease (leprosy). The numbers of isolation patients at these hospitals at 31 December 1970 were: Little Bay (New South Wales), 8; Fantome Island (North Queensland), 12; Derby (Western Australia), 151; and East Arm Settlement (Northern Territory), 6. In addition, there were 79 voluntary patients resident in the East Arm Settlement, mostly for the purpose of reconstructive surgery. With the exception of the Institute of Tropical Medicine at Little Bay, nursing services are provided mostly by sisters of religious orders under supervision of Government medical officers.

Special wards for the isolation and treatment of leprosy patients are also provided at other centres. The location of these wards and the number of isolation patients resident at 31 December 1970, were: Fairfield (Victoria), 2; Princess Alexandra Hospital (Queensland), 5.

**Mental health institutions**

The presentation of meaningful statistics of mental health services has become increasingly difficult because of changes in recent years in the institutions and services for the care of mental patients. The emphasis has shifted from institutions for care of patients certified insane to a range of mental health services provided for in-patients and out-patients at psychiatric hospitals, admission and reception centres, day hospitals, out-patient clinics, training centres, homes for the mentally retarded and geriatric patients, psychiatric units in general hospitals, and the like.

To enable valid comparisons to be made of mental health statistics in each State the mental health authorities of all States have proposed standard statistical definitions. The statistical recording systems of a number of States are currently being reviewed for this purpose. Meanwhile certain limited information is available which is shown in the following paragraphs. Since a common measure has not yet been achieved, the figures for States should not be added to form Australian totals.

#### In-patient institutions

The following table shows the number of major in-patient institutions in each State in 1969, the accommodation they provide for patients, and their staff. In-patient care for voluntary patients is also provided at many general public and a number of private hospitals. There are also psychiatric units attached to gaols, juvenile corrective centres and similar institutions. Only the following institutions are included in this table: *New South Wales*—the fourteen State psychiatric centres (a psychiatric hospital and associated admission centre being regarded as one psychiatric centre) and the three authorised private psychiatric hospitals (several other institutions provide in-patient care for voluntary patients only, but are excluded from the scope of the statistics); *Victoria*—the four psychiatric hospitals, ten mental hospitals, six informal hospitals, and nine intellectual deficiency training centres; *Queensland*—three psychiatric hospitals, three training centres, and one rehabilitation centre; *South Australia*—two mental hospitals and three receiving centres; *Western Australia*—the three approved mental hospitals and two training centres; and *Tasmania*—the Royal Derwent hospital.

MENTAL HEALTH: IN-PATIENT INSTITUTIONS, ACCOMMODATION AND STAFF  
STATES AT 30 JUNE 1969

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.
In-patient institutions . . . . .	17	(a)28	7	5	5	1
Beds and cots for patients . . . . .	10,963	(b)9,102	3,577	2,122	1,514	1,030
Staff—Medical . . . . .	(c)261	(a)256	(d)33	37	19	6
Nursing . . . . .	(e)3,530	(a)(e)2,969	(d)1,351	735	575	321

(a) At 31 December 1969. (b) The number of beds and cots occupied on 31 October 1969. (c) Includes visiting specialists who are paid for their services. (d) Full-time staff only. (e) Includes attendants.

There are no separate in-patient institutions for mental patients in the Northern Territory or the Australian Capital Territory. With the appointment of a Director of Psychiatric Services the organisation of a psychiatric service was begun in the Australian Capital Territory in 1967–68.

#### Patients

The following table sets out statistics of in-patients under the care of the respective State mental health services.

IN-PATIENTS AT MENTAL HEALTH INSTITUTIONS, 1968-69

	N.S.W.	Vic.(a)(b)	Qld	S.A.	W.A.	Tas.
In-patients at beginning of year—						
Males . . . . .	r6,331	r5,240	r2,324	1,312	r1,274	436
Females . . . . .	r5,203	r4,902	1,483	1,153	r903	478
Persons . . . . .	r11,534	r10,142	3,807	2,465	r2,177	914
Admissions and re-admissions during year—						
Males . . . . .	9,138	6,393	1,287	1,534	1,492	572
Females . . . . .	8,645	6,628	637	1,430	1,148	549
Persons . . . . .	17,783	13,021	1,924	2,964	2,640	1,121
Total in-patients (cases) treated—						
Males . . . . .	15,469	11,633	3,611	2,846	2,766	1,008
Females . . . . .	13,848	11,530	2,120	2,583	2,051	1,027
Persons . . . . .	29,317	23,163	5,731	5,429	4,817	2,035
Discharges, including deaths—						
Males . . . . .	9,337	6,173	1,254	1,623	1,510	541
Females . . . . .	8,908	6,632	649	1,523	1,180	564
Persons . . . . .	18,245	12,805	1,903	3,146	2,690	1,105
In-patients at end of year—						
Males . . . . .	6,132	5,460	2,357	1,223	1,256	467
Females . . . . .	4,940	4,898	1,471	1,060	871	463
Persons . . . . .	11,072	10,358	3,828	2,283	2,127	930

(a) Year ended 31 December 1969. (b) Includes transfers from one institution to another.



**State government expenditure on mental health services**

The following figures show particulars of expenditure by States for the year 1968-69. Maintenance expenditure represents expenditure on wages and salaries, upkeep and repair of buildings and grounds, and other maintenance. The figure for New South Wales relates to the 14 State psychiatric centres and the Master in Protective Jurisdiction of the Supreme Court. Capital expenditure is expenditure as approved under the *State Grants (Mental Health Institutions) Act 1964-1970* only, and excludes the Commonwealth contributions paid under this Act—see page 416.

**MENTAL HEALTH: EXPENDITURE, STATES, 1968-69**  
(£'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	All States
Maintenance . . . . .	23,608	23,727	7,507	5,873	4,409	2,348	67,472
Capital . . . . .	3,851	2,400	645	865	751	798	9,310

**Notifiable diseases**

*Methods of prevention and control.* Provision exists in the Health Acts of all States for the compulsory notification of certain infectious and other diseases and for the application of preventive measures. When any such disease occurs the local authority must be notified at once, and in some States notification must be made also to the Health Department.

As a rule, the local authorities are required to report from time to time to the Central Board of Health in each State on the health, cleanliness and general sanitary state of their several districts and on the appearance of certain diseases. Regulations provide for the disinfection and cleansing of premises and for the disinfection or destruction of bedding, clothing or other articles which have been exposed to infection. Regulations also provide that persons suspected to be suffering from, or to be carriers of, infectious disease must submit to clinical and laboratory examination. Persons suffering from certain diseases, for example, smallpox and leprosy, are detained in isolation.

*Notifiable diseases and cases notified, 1970.* The following table shows, by State and Territory, the number of cases notified in 1970 for those diseases notifiable in all States and Territories. In May 1965 the National Health and Medical Research Council at its Fifty-ninth Session proposed a basic list of diseases to be notifiable in each State and Territory, and this table is based upon that proposal. The table does not include all diseases which are notifiable in a State or Territory. Factors such as the following affect both the completeness of the figures and the comparability from State to State and from year to year: availability of medical and diagnostic services; varying degrees of attention to notification of diseases; and enforcement and follow-up of notifications by Health Departments.

**NOTIFIABLE DISEASES(a): NUMBER OF CASES NOTIFIED**  
**STATES AND TERRITORIES, 1970**

Disease	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Anthrax . . . . .	..	..	..	..	..	..	..	..	..
Brucellosis . . . . .	22	106	7	..	2	..	1	..	138
Cholera . . . . .	..	..	..	..	..	..	..	..	..
Diphtheria . . . . .	..	68	1	3	2	1	..	..	75
Gonorrhoea . . . . .	3,497	2,078	1,576	650	1,186	75	443	50	9,555
Infectious hepatitis(b) . .	2,851	2,401	1,000	485	166	318	229	118	7,568
Hansen's disease (Leprosy) .	..	..	1	1	53	..	12	..	67
Leptospirosis . . . . .	19	2	50	..	..	..	..	..	71
Paratyphoid fever . . . . .	..	..	..	..	..	1	..	..	1
Polio myelitis . . . . .	2	..	..	..	..	..	..	..	2
Syphilis . . . . .	448	73	163	74	159	7	16	4	944
Tetanus . . . . .	7	6	4	2	..	2	..	..	21
Tuberculosis(c) . . . . .	644	421	273	147	123	45	16	43	1,712
Typhoid . . . . .	5	10	2	1	1	..	1	..	20
Typhus (all forms) . . . . .	3	..	2	..	..	..	..	..	5

(a) No cases of plague, smallpox or yellow fever were notified.  
(c) Queensland figure includes erythema nodosum and pleural effusion.

(b) Includes hepatitis serum (homologous).

*New infectious hepatitis cases notified.* The following table shows the number of cases of infectious hepatitis notified in each State and Territory during the years 1966 to 1970.

**INFECTIOUS HEPATITIS: CASES NOTIFIED  
STATES AND TERRITORIES, 1966 TO 1970**

<i>State or Territory</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
New South Wales . . . .	4,188	4,032	2,526	2,820	2,851
Victoria . . . . .	2,137	2,991	2,362	2,364	2,401
Queensland(a) . . . .	843	1,973	1,819	886	1,000
South Australia . . . .	978	1,299	558	615	485
Western Australia . . . .	28	190	147	146	166
Tasmania . . . . .	200	425	589	493	318
Northern Territory . . . .	78	158	66	74	229
Australian Capital Territory . .	125	248	56	52	118
<b>Australia . . . . .</b>	<b>8,577</b>	<b>11,316</b>	<b>8,123</b>	<b>7,450</b>	<b>7,568</b>

(a) Includes hepatitis, serum (homologous).

*New tuberculosis cases notified.* The following table gives particulars of the number of new cases of tuberculosis notified in Australia for 1970.

**TUBERCULOSIS: NEW CASES NOTIFIED(a), STATES AND TERRITORIES, 1970**

<i>State or Territory</i>	<i>Age group (years)</i>					<i>Total</i>
	<i>0-14</i>	<i>15-34</i>	<i>35-54</i>	<i>55 and over</i>	<i>Not stated</i>	
New South Wales . . . .	38	95	229	282	..	644
Victoria . . . . .	42	84	154	141	..	421
Queensland . . . . .	5	49	90	129	..	273
South Australia . . . .	4	22	54	67	..	147
Western Australia . . . .	12	21	41	49	..	123
Tasmania . . . . .	1	12	18	14	..	45
Northern Territory . . . .	1	6	6	3	..	16
Australian Capital Territory . .	8	8	13	14	..	43
<b>Australia . . . . .</b>	<b>111</b>	<b>297</b>	<b>605</b>	<b>699</b>	<b>..</b>	<b>1,712</b>

(a) Figures supplied by the Director of Tuberculosis in each State.

*New cases of poliomyelitis notified.* The number of new cases of poliomyelitis notified, and confirmed by the Poliomyelitis Sub-committee of the National Health and Medical Research Council, is shown for each State and Territory for each year from 1966 to 1970 in the following table.

**POLIOMYELITIS: NEW CASES NOTIFIED, STATES AND TERRITORIES, 1966 TO 1970**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1966 . . . . .	..	..	1	..	..	..	..	..	1
1967 . . . . .	..	1	..	..	..	..	..	..	1
1968 . . . . .	..	1	1	..	..	1	..	..	3
1969 . . . . .	..	1	..	..	..	..	..	..	1
1970 . . . . .	2	..	..	..	..	..	..	..	2

### Chronic illnesses, injuries, and impairments

As part of the quarterly population survey (see Chapter 21, Employment and Unemployment) a survey was conducted in May 1968, in all States except Victoria, in order to obtain estimates of the incidence of chronic illnesses, injuries and impairments in the population, the nature of these conditions and their cause (e.g. whether they were congenital or due to war, accident, etc.). In addition, the survey obtained information on the effect of these conditions on the activities of those who suffered from them.

Estimates derived from the survey were published in a mimeographed bulletin *Chronic Illnesses, Injuries and Impairments, May 1968* (Ref. No. 17.3). A summary of the principal results is given in the Appendix to Year Book No. 56.

### Disposal of dead by cremation

The first crematorium in Australia was opened in South Australia in 1903. At 31 December 1970 there were twenty-six crematoria in Australia, situated as follows: New South Wales, 10; Victoria, 4; Queensland, 5; South Australia, 2; Western Australia, 2; Tasmania, 2; Australian Capital Territory, 1. There is no crematorium in the Northern Territory. The following table shows the number of cremations and total deaths in each State and Territory for each of the years 1966 to 1970.

CREMATIONS AND TOTAL DEATHS: STATES AND TERRITORIES(a), 1966 TO 1970

State or Territory	1966		1967		1968		1969		1970	
	Crema-tions	Total deaths	Crema-tions	Total deaths	Crema-tions	Total deaths	Crema-tions	Total deaths	Crema-tions	Total deaths
New South Wales . . .	17,733	40,546	17,486	39,613	18,749	41,803	18,564	40,655	20,087	43,601
Victoria . . .	10,362	28,673	10,173	28,373	10,939	29,967	10,617	28,976	11,265	30,335
Queensland . . .	5,097	14,861	5,156	14,736	5,686	16,078	5,733	15,786	6,303	17,055
South Australia . . .	1,957	9,323	2,076	9,071	2,476	9,916	2,464	9,337	2,884	10,138
Western Australia . . .	2,308	6,772	2,448	6,779	2,548	7,470	2,590	7,350	2,826	7,543
Tasmania . . .	947	3,159	1,019	3,228	1,049	3,284	1,066	3,309	1,039	3,174
Northern Territory . . .		154		527		543		485		608
Australian Capital Territory . . .	(b)81	441	180	376	235	488	309	588	338	594
<b>Australia . . .</b>	<b>38,485</b>	<b>103,929</b>	<b>38,538</b>	<b>102,703</b>	<b>41,682</b>	<b>109,549</b>	<b>41,343</b>	<b>106,486</b>	<b>44,742</b>	<b>113,048</b>

(a) Cremations are not necessarily carried out in the State or Territory where the death was registered. (b) Commenced operation 8 July 1966.





## CHAPTER 15

### LAW, ORDER, AND PUBLIC SAFETY

This chapter provides summary information about criminal and civil court proceedings (including divorce and bankruptcy); selected crime reported or becoming known to the police; police strengths; prisons; expenditure on law and order; and patents, trademarks and copyright. The main sources for further information for individual States are the State Year Books and Statistical Registers, and the annual reports of the relevant justice authorities.

The statistics in this chapter are influenced by a number of factors which affect comparability from State to State and from year to year, such as differences in the jurisdiction of courts; changes in the law in particular States and differences in the laws between States; differences in the methods of compiling the figures (e.g. in respect of persons convicted for more than one offence); the prevailing attitude to laws such as those connected with liquor, vagrancy, gaming, and traffic offences; and the strength and distribution of the police forces.

Details of the development and structure of the State, Territory, and Commonwealth legal systems are given in Year Book No. 55, pages 565-7 and Year Book No. 56, page 441. The only notable change since then occurred in South Australia where the *Local Courts Act Amendment Act*, 1969 came into effect on 20 August 1970. It provides for the establishment of District Criminal Courts. Provision has been made for the division of the State into districts and for the appointment by the Senior Judge, of judges known as Recorders, to courts in each of these districts. Under the Act the District Court has the jurisdiction and powers of the Supreme Court in respect of indictable offences except for capital offences and for felonies and misdemeanours where the maximum punishment is imprisonment exceeding ten years.

#### Lower (magistrates') courts

Particulars of the powers of magistrates, and of special provisions for dealing with juvenile offenders in special courts in the various States and Territories are given in Year Book No. 55, pages 567 to 571. The statistics in the following tables are influenced by the factors listed at the beginning of this chapter and, in particular by differences in the jurisdiction of lower courts in the various States.

##### Criminal proceedings

The number of charges heard at magistrates' courts in each State and Territory in the years 1965 to 1969 are given in the following table. The statistics relate to individual offences for which persons were charged, except for Queensland where proceedings against a person for a number of offences at the one hearing are counted as one charge.

**MAGISTRATES' COURTS(a): CHARGES HEARD, STATES AND TERRITORIES  
1965 TO 1969(b)**

<i>State or Territory</i>	<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>
New South Wales	341,171	338,808	336,746	337,540	361,377
Victoria	323,644	307,465	318,172	326,445	341,284
Queensland(c)(d)	113,568	111,743	95,155	100,046	107,375
South Australia(c)	71,468	83,080	98,588	117,081	118,877
Western Australia	67,244	66,863	76,458	86,836	93,157
Tasmania	36,535	37,624	36,550	35,077	32,587
Northern Territory	(e)7,519	(e)7,961	10,336	10,459	(f)13,153
Australian Capital Territory	7,845	9,025	7,318	7,647	6,685
<b>Australia</b>	<b>968,994</b>	<b>962,569</b>	<b>979,323</b>	<b>1,021,131</b>	<b>1,074,495</b>

(a) Includes Children's Courts, except for Northern Territory. (b) Excludes minor traffic offences settled without court proceedings. (c) Year ended 30 June. (d) A person charged on several counts at the one hearing is included only once. (e) Excludes courts at Tennant Creek and Katherine. (f) Excludes court at Tennant Creek.

Differences between States in the preceding table, and within States over a period of time, are influenced by the large number of traffic offences and the arrangements which have been introduced at various times for dealing with them. Provision exists in the States and the Australian Capital Territory for settlement of parking and minor traffic offences by payment of fines without court proceedings. The numbers involved are shown in the next table.

**MINOR TRAFFIC OFFENCES SETTLED BY PAYMENT OF FINES  
WITHOUT COURT PROCEEDINGS, STATES AND A.C.T., 1965 TO 1969**

<i>State and Territory</i>	<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>
New South Wales . . .	400,459	464,122	411,447	426,496	418,626
Victoria . . . . .	229,478	313,529	343,432	410,857	477,332
Queensland(a) . . . .	115,446	209,417	264,617	253,429	236,347
South Australia(a) . .	121,535	240,359	240,014	239,619	244,120
Western Australia . . .	51,167	64,842	62,827	83,146	116,820
Tasmania . . . . .	40,917	50,914	45,081	55,677	56,076
Australian Capital Territory .	5,145	4,590	6,765	4,430	4,340
<b>Total . . . . .</b>	<b>964,147</b>	<b>1,347,773</b>	<b>1,374,183</b>	<b>1,473,654</b>	<b>1,553,661</b>

(a) Year ended 30 June.

The following tables show the number of cases dealt with in magistrates' courts, in which convictions were made.

**CASES AT MAGISTRATES' COURTS(a) IN WHICH CONVICTIONS WERE MADE, BY  
CLASS OF OFFENCE: STATES AND TERRITORIES, 1969**

<i>Class of offence</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld (b)(c)</i>	<i>S.A. (b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T. (d)</i>	<i>A.C.T.</i>	<i>Aust.</i>
Against the person . . .	4,923	4,170	815	785	1,254	580	350	172	13,049
Against property . . .	34,369	25,829	6,042	5,879	12,300	2,921	720	653	88,713
Forgery and offences against the currency . .	1,291	287	8	14	68	96	237	145	2,146
Against good order . . .	80,980	33,394	31,201	11,385	17,370	1,653	6,897	817	183,697
Other(e) . . . . .	187,734	233,894	50,975	87,903	54,964	21,265	3,883	3,894	644,512
<b>Total . . . . .</b>	<b>309,297</b>	<b>297,574</b>	<b>89,041</b>	<b>105,966</b>	<b>85,956</b>	<b>26,515</b>	<b>12,087</b>	<b>5,681</b>	<b>932,117</b>

(a) Includes Children's Courts except for Northern Territory. (b) Year ended 30 June. (c) A person convicted on several counts at the one hearing is included only once. (d) Excludes court at Tennant Creek. (e) Includes traffic offences other than minor traffic offences settled without court proceedings.

**CASES AT MAGISTRATES' COURTS(a) IN WHICH CONVICTIONS WERE MADE  
STATES AND TERRITORIES(b), 1965 TO 1969**

<i>State or Territory</i>	<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>
New South Wales . . .	304,053	299,780	297,697	290,616	309,297
Victoria . . . . .	296,542	279,631	286,316	291,821	297,574
Queensland(c)(d) . . .	101,955	98,214	82,271	85,363	89,041
South Australia(c) . . .	62,238	71,694	87,110	105,027	105,966
Western Australia . . .	64,014	63,489	72,798	81,892	85,956
Tasmania . . . . .	31,256	32,414	31,525	30,100	26,515
Northern Territory . . .	(e)7,026	(e)7,402	9,437	9,416	(f)12,087
Australian Capital Territory .	6,688	7,793	6,021	6,947	5,681
<b>Australia . . . . .</b>	<b>873,772</b>	<b>860,417</b>	<b>873,175</b>	<b>901,182</b>	<b>932,117</b>

(a) Includes Children's Courts except for Northern Territory. (b) Excludes minor traffic offences settled without court proceedings. (c) Year ended 30 June. (d) A person convicted on several counts at the one hearing is included only once. (e) Excludes courts at Tennant Creek and Katherine. (f) Excludes court at Tennant Creek.



The number of cases in which convictions for drunkenness were recorded during each of the years 1965 to 1969 are given in the following table.

**DRUNKENNESS CASES<sup>(a)</sup> IN WHICH CONVICTIONS WERE MADE  
STATES AND TERRITORIES, 1965 TO 1969**

<i>State or Territory</i>	<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>
New South Wales . . .	63,143	56,159	55,134	57,710	59,048
Victoria . . .	23,790	24,279	23,855	24,338	25,582
Queensland <sup>(b)(c)</sup> . . .	29,224	28,791	29,530	28,409	28,140
South Australia <sup>(b)</sup> . . .	7,110	7,334	6,109	6,889	7,528
Western Australia . . .	8,288	9,033	10,722	11,146	11,970
Tasmania . . .	491	461	481	501	598
Northern Territory . . .	<sup>(d)</sup> 3,938	<sup>(d)</sup> 3,231	4,598	5,216	<sup>(e)</sup> 6,299
Australian Capital Territory . . .	401	377	313	316	388
<b>Australia . . .</b>	<b>136,385</b>	<b>129,665</b>	<b>130,742</b>	<b>134,525</b>	<b>139,553</b>

<sup>(a)</sup> Includes Children's Courts except for Northern Territory. <sup>(b)</sup> Year ended 30 June.  
<sup>(c)</sup> A person convicted on several counts at the one hearing is included only once. <sup>(d)</sup> Excludes courts at Tennant Creek and Katherine. <sup>(e)</sup> Excludes court at Tennant Creek.

**Convictions for certain serious offences at lower (magistrates') courts**

The figures given in the preceding tables refer to all convictions, and include offences of a technical nature, drunkenness, and minor breaches of good order, which come under the heading of crime in a very different sense from the more serious offences. The following table has therefore been prepared to show convictions at magistrates' courts for the years 1965 to 1969 for offences against the person, offences against property, forgery, and offences against the currency.

**CONVICTIONS FOR CERTAIN SERIOUS OFFENCES<sup>(a)</sup> AT MAGISTRATES'  
COURTS<sup>(b)</sup>: STATES AND TERRITORIES, 1965 TO 1969**

<i>State or Territory</i>	<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>
New South Wales . . .	34,585	34,911	35,809	37,367	40,583
Victoria . . .	23,785	25,804	27,355	26,338	30,286
Queensland <sup>(c)(d)</sup> . . .	6,160	6,900	6,789	6,604	6,865
South Australia <sup>(c)</sup> . . .	4,813	5,085	5,180	5,817	6,678
Western Australia . . .	7,991	9,357	10,207	12,065	13,622
Tasmania . . .	3,670	3,285	3,278	3,650	3,597
Northern Territory . . .	<sup>(e)</sup> 627	<sup>(e)</sup> 647	818	941	<sup>(f)</sup> 1,307
Australian Capital Territory . . .	627	761	895	1,133	970
<b>Australia . . .</b>	<b>82,258</b>	<b>86,750</b>	<b>90,331</b>	<b>93,915</b>	<b>103,908</b>

<sup>(a)</sup> Offences against the person, offences against property, forgery, and offences against the currency. <sup>(b)</sup> Includes Children's Courts except for Northern Territory. <sup>(c)</sup> Year ended 30 June. <sup>(d)</sup> A person convicted on several counts at the one hearing is included only once. <sup>(e)</sup> Excludes courts at Tennant Creek and Katherine. <sup>(f)</sup> Excludes court at Tennant Creek.

**Committals to higher (judges') courts**

In the case of other than minor offences a preliminary hearing is held before a stipendiary magistrate or justice of the peace for the purpose of determining whether a *prima facie* case has been made out. If the magistrate or justice of the peace finds that there is a case to answer, the person charged is committed for trial at a higher court. The numbers of such committals are shown in the following tables.

**COMMITTALS TO HIGHER COURTS(a), BY CLASS OF OFFENCE: STATES AND TERRITORIES, 1969**

<i>Class of offence</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld (b)(c)</i>	<i>S.A. (b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T. (d)</i>	<i>A.C.T.</i>	<i>Aust.</i>
Against the person .	1,993	1,268	369	275	107	137	28	37	4,214
Against property .	7,014	3,053	1,198	433	807	532	109	131	13,277
Forgery and offences against the currency .	350	738	2	22	5	50	36	47	1,250
Against good order .	238	48	4	6	2	13	16	1	328
Other .	198	408	6	13	29	15	43	3	715
<b>Total . . .</b>	<b>9,793</b>	<b>5,515</b>	<b>1,579</b>	<b>749</b>	<b>950</b>	<b>747</b>	<b>232</b>	<b>219</b>	<b>19,784</b>

(a) Includes committals from Children's Court except for Northern Territory. (b) Year ended 30 June. (c) A person committed on several counts at the one hearing is included only once. (d) Excludes court at Tennant Creek.

**COMMITTALS TO HIGHER COURTS(a): STATES AND TERRITORIES  
1965 TO 1969**

<i>State or Territory</i>	<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>
New South Wales . . .	7,908	8,758	7,954	8,229	9,793
Victoria . . .	4,745	5,308	5,655	6,192	5,515
Queensland(b)(c) . . .	1,477	1,614	1,611	1,428	1,579
South Australia(b) . . .	753	737	713	726	749
Western Australia . . .	515	523	609	1,037	950
Tasmania . . .	414	486	549	716	747
Northern Territory . . .	(d)169	(d)127	176	196	(e)232
Australian Capital Territory .	224	137	170	240	219
<b>Australia . . .</b>	<b>16,205</b>	<b>17,690</b>	<b>17,437</b>	<b>18,764</b>	<b>19,784</b>

(a) Includes committals from the Children's Court except for Northern Territory. (b) Year ended 30 June. (c) A person committed on several counts at the one hearing is included only once. (d) Excludes courts at Tennant Creek and Katherine. (e) Excludes court at Tennant Creek.

### Civil proceedings

Civil proceedings in the lower courts refer to those in the Small Debts Courts in New South Wales, Courts of Petty Sessions in Victoria, Magistrates' Courts in Queensland, Local Courts in South Australia and Western Australia, Courts of Requests in Tasmania, Local Courts in the Northern Territory, and the Court of Petty Sessions in the Australian Capital Territory. Statistics of civil proceedings in the lower courts are given on page 434.

### Higher (judges') courts

Higher courts are presided over by a judge, sometimes with a jury. The general jurisdiction of the higher courts in the States and Territories, which for this purpose include District, County and Supreme Courts, includes appeals from the lower courts, cases of serious crime committed from lower courts, and civil cases involving common law, commercial causes, equity, etc. Under the Commonwealth *Matrimonial Causes Act* 1959-1966, the Supreme Courts of the various States and Territories have exclusive jurisdiction in matrimonial causes, and under the *Bankruptcy Act* 1966-1969, the Federal Court of Bankruptcy, the Supreme Courts of New South Wales, Queensland, Western Australia, Tasmania and the Northern Territory, and the Courts of Insolvency in Victoria and South Australia, can deal with bankruptcy cases. However, the Federal Court handles bankruptcy cases in New South Wales and Victoria.

Proceedings at higher courts include therefore criminal, civil, divorce, and bankruptcy proceedings. Separate details of each are given in the following paragraphs.

### Criminal proceedings

The statistics in the following tables are influenced by the factors listed at the beginning of this chapter.

**PERSONS CONVICTED(a) AT HIGHER COURTS, BY NATURE OF OFFENCE: STATES  
AND TERRITORIES, 1969**

Offence	N.S.W.	Vic.	Qld (b)	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Against the person—									
Murder . . . . .	25	6	5	2	5	4	1	..	48
Attempted murder . . . . .	2	..	3	1	2	..	..	..	8
Manslaughter(c) . . . . .	32	26	16	4	10	5	3	..	96
Culpable driving . . . . .	66	14	32	5	5	3	..	1	126
Rape . . . . .	58	23	11	5	3	4	..	..	104
Other offences against females	307	207	122	142	10	33	5	8	834
Abduction . . . . .	2	13	1	..	1	..	..	..	17
Unnatural offences . . . . .	92	125	30	18	2	8	..	2	277
Abortion and attempt to procure	9	6	4	1	..	..	..	..	20
Bigamy . . . . .	9	4	2	1	2	..	..	..	18
Malicious wounding and aggravated									
assault . . . . .	174	50	82	6	27	5	4	3	351
Common assault . . . . .	87	26	4	4	2	10	14	..	147
Other offences against the person . . . . .	21	6	10	18	3	5	..	..	63
<i>Total, against the person . . . . .</i>	<i>884</i>	<i>506</i>	<i>322</i>	<i>207</i>	<i>72</i>	<i>77</i>	<i>27</i>	<i>14</i>	<i>2,109</i>
Against property—									
Burglary, breaking and entering . . . . .	1,307	361	860	340	351	136	58	28	3,441
Robbery and stealing from the person	196	138	54	22	21	15	6	..	452
Embezzlement and larceny by servants	..	63	14	9	8	..	1	5	100
Other larceny(d) . . . . .	700	177	199	11	5	..	13	10	1,115
Receiving . . . . .	163	33	82	11	25	11	1	2	328
Fraud and false pretences . . . . .	239	69	27	22	13	15	1	..	386
Arson . . . . .	18	14	20	..	3	5	..	1	61
Malicious damage . . . . .	18	20	15	5	..	10	..	..	68
Other offences against property . . . . .	3	2	..	14	2	..	..	4	25
<i>Total, against property . . . . .</i>	<i>2,644</i>	<i>877</i>	<i>1,271</i>	<i>434</i>	<i>428</i>	<i>192</i>	<i>80</i>	<i>50</i>	<i>5,976</i>
Forgery and offences against the currency	29	80	5	16	4	11	8	4	157
Against good order . . . . .	2	22	4	..	14	12	..	..	28
Other . . . . .	50	204	8	55	14	12	5	..	348
<b>Grand total . . . . .</b>	<b>3,609</b>	<b>1,689</b>	<b>1,610</b>	<b>712</b>	<b>518</b>	<b>292</b>	<b>120</b>	<b>68</b>	<b>8,618</b>

(a) A person convicted on several counts at the one hearing is classified according to the most serious offence and is included only once. (b) Year ended 30 June. (c) Includes causing death by dangerous driving. (d) Includes unlawfully using vehicles.

**PERSONS CONVICTED(a) AT HIGHER COURTS: STATES AND  
TERRITORIES, 1965 TO 1969**

State or Territory	1965	1966	1967	1968	1969
New South Wales . . . . .	2,900	3,201	3,126	3,254	3,609
Victoria . . . . .	1,618	1,725	1,786	1,790	1,689
Queensland(b) . . . . .	1,201	1,330	1,279	1,160	1,610
South Australia . . . . .	713	738	707	692	712
Western Australia . . . . .	315	302	357	507	518
Tasmania . . . . .	170	204	254	243	292
Northern Territory . . . . .	76	58	65	88	120
Australian Capital Territory . . . . .	85	67	69	86	68
<b>Australia . . . . .</b>	<b>7,078</b>	<b>7,625</b>	<b>7,643</b>	<b>7,820</b>	<b>8,618</b>

(a) See note (a) above. (b) Year ended 30 June.

**Capital punishment**

There were no executions in Australia in 1970. For a brief account of the law relating to capital punishment in Australia, see Year Book No. 55, page 573.

**Civil proceedings**

The following table shows civil judgments (excluding those for divorce and bankruptcy) in the higher courts during 1969. The particulars given below include the number and amount of judgments entered by default or confession or agreement.



## CIVIL CASES AT HIGHER COURTS: STATES AND TERRITORIES, 1969

		N.S.W.	Vic.	Qld (a)	S.A.	W.A. (b)	Tas.	N.T.	A.C.T.
Judgments . . . . .	number	58,161	11,288	1,101	327	801	n.a.	n.a.	629
Amounts awarded	\$'000	n.a.	23,812	5,238	2,159	3,359	n.a.	n.a.	1,744

(a) Year ended 30 June. (b) Judgments signed and entered.

Because of differences in the jurisdictions of higher and lower courts in respect of civil proceedings in each State and Territory, the figures above should be read in conjunction with the following table, showing the numbers of plaintiffs entered and amounts awarded to plaintiffs in the lower courts in 1969.

## CIVIL CASES AT LOWER COURTS: STATES AND TERRITORIES, 1969

		N.S.W.	Vic.	Qld (a)	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Plaints entered . . . . .	number	155,469	200,801	53,657	93,679	60,854	20,949	(b)3,731	7,152	596,292
Amounts awarded to plaintiffs	\$'000	5,179	17,246	4,137	4,828	3,263	1,540	n.a.	n.a.	n.a.

(a) Year ended 30 June. (b) Excludes Tennant Creek.

## Divorce and other matrimonial causes

A description of Commonwealth legislation governing divorce and other matrimonial causes in Australia is contained in Year Book No. 55, page 580. Under this legislation a court may grant decrees of dissolution of marriage (divorce), nullity of marriage, judicial separation, restitution of conjugal rights, and jactitation of marriage (i.e., that a person should refrain from making a false claim that a marriage has taken place between him and another person). Orders may be made for maintenance, the custody and welfare of children, and settlement of property, and damages for adultery. The following statistics refer only to petitions for, and decrees of, dissolution, nullity, and judicial separation. Detailed statistics are published in the annual and quarterly *Divorce* bulletins, and the annual *Demography* bulletin.

## Petitions filed

Statistics of petitions exclude cross-petitions contained in answers by respondents. The following table shows the number of petitions for dissolution of marriage, nullity of marriage, and judicial separation filed in each State and Territory during 1970.

PETITIONS FILED FOR DISSOLUTION, NULLITY, AND JUDICIAL SEPARATION  
STATES AND TERRITORIES, 1970

Petition for—		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Dissolution—										
By husband . . . . .		2,317	1,479	736	507	578	223	35	73	5,948
By wife . . . . .		4,193	2,182	1,117	858	626	277	32	146	9,431
Total . . . . .		6,510	3,661	1,853	1,365	1,204	500	67	219	15,379
Nullity—										
By husband . . . . .		12	3	2	4	..	1	..	..	22
By wife . . . . .		14	11	9	3	2	2	2	..	43
Total . . . . .		26	14	11	7	2	3	2	..	65
Dissolution or nullity—										
By husband . . . . .		2	5	2	1	..	..	..	..	10
By wife . . . . .		4	9	4	1	..	..	..	..	18
Total . . . . .		6	14	6	2	..	..	..	..	28
Judicial separation—										
By husband . . . . .		1	1	..	..	..	..	..	..	2
By wife . . . . .		15	1	3	4	..	..	1	1	25
Total . . . . .		16	2	3	4	..	..	1	1	27
All petitions—										
By husband . . . . .	No.	2,332	1,488	740	512	578	224	35	73	5,982
per cent		36	40	40	37	48	45	50	33	39
By wife . . . . .	No.	4,226	2,203	1,133	(a)868	628	279	35	147	(a)9,519
per cent		64	60	60	63	52	55	50	67	61
Grand total . . . . .		6,558	3,691	1,873	(a)1,380	1,206	503	70	220	(a)15,501

(a) Includes two petitions for dissolution or judicial separation.

**Decrees granted**

Statistics of decrees granted refer to decrees *nisi* made absolute except for the following cases, where no decree *nisi* is granted.

- (i) Decrees of judicial separation, which do not dissolve the marriage and may be discharged on resumption of cohabitation.
- (ii) Decrees of nullity of void marriage, as distinct from nullity of voidable marriage. A void marriage is invalid because of failure to meet a legal requirement, and the original decree of nullity is final. A valid marriage is voidable on proof of one or more of the grounds set out in Section 21 of the *Matrimonial Causes Act 1959-1966*, e.g. that either party is incapable of consummating the marriage.

The following tables show the number of dissolutions of marriage, nullities of marriage, and judicial separations granted in each State and Territory during 1970 classified according to petitioner, and the grounds on which decrees were granted during the years 1966 to 1970.

**DECREES FOR DISSOLUTION, NULLITY, AND JUDICIAL SEPARATION  
STATES AND TERRITORIES, 1970**

Decree of—		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Dissolution—</b>										
To husband . . .		1,982	988	610	354	433	187	30	71	4,655
To wife . . .		3,624	1,593	897	585	456	235	20	122	7,532
To both . . .		..	10	..	..	..	..	..	1	11
<b>Total . . .</b>		<b>5,606</b>	<b>2,591</b>	<b>1,507</b>	<b>939</b>	<b>889</b>	<b>422</b>	<b>50</b>	<b>194</b>	<b>12,198</b>
<b>Nullity—</b>										
To husband . . .		5	..	1	..	1	..	..	1	8
To wife . . .		17	13	3	1	..	3	..	..	37
<b>Total . . .</b>		<b>22</b>	<b>13</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>..</b>	<b>1</b>	<b>45</b>
<b>Judicial separation—</b>										
To husband . . .		..	..	..	..	..	..	..	..	..
To wife . . .		..	..	..	2	..	1	..	1	4
<b>Total . . .</b>		<b>..</b>	<b>..</b>	<b>..</b>	<b>2</b>	<b>..</b>	<b>1</b>	<b>..</b>	<b>1</b>	<b>4</b>
<b>All decrees—</b>										
To husband . . .	No.	1,987	988	611	354	434	187	30	72	4,663
	per cent	35	38	40	38	49	44	60	37	38
To wife . . .	No.	3,641	1,606	900	588	456	239	20	123	7,573
	per cent	65	62	60	62	51	56	40	63	62
To both . . .	No.	..	10	..	..	..	..	..	1	11
<b>Grand total . . .</b>		<b>5,628</b>	<b>2,604</b>	<b>1,511</b>	<b>942</b>	<b>890</b>	<b>426</b>	<b>50</b>	<b>196</b>	<b>12,247</b>

**DECREES FOR DISSOLUTION, NULLITY, AND JUDICIAL SEPARATION  
GROUNDS, AUSTRALIA, 1966 TO 1970**

<i>Ground</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
<b>DISSOLUTION</b>					
Single grounds—					
Desertion . . . . .	4,532	4,398	4,863	4,730	5,098
Adultery . . . . .	2,288	2,270	2,611	2,916	3,419
Separation . . . . .	1,968	1,868	1,959	1,758	2,023
Cruelty . . . . .	488	550	670	750	942
Drunkenness . . . . .	142	128	150	136	142
Failure to pay maintenance	6	3	10	8	3
Non-compliance with res- titution decree . . . . .	7	5	5	5	2
Refusal to consummate . . . . .	23	30	39	32	42
Insanity . . . . .	10	7	7	7	6
Frequent convictions . . . . .	15	12	18	18	25
Imprisonment . . . . .	6	7	4	3	3
Other single grounds . . . . .	8	10	17	11	17
Dual grounds—					
Desertion and adultery . . . . .	93	76	68	102	90
Desertion and separation . . . . .	67	68	88	145	96
Desertion and cruelty . . . . .	34	50	44	77	59
Desertion and drunkenness . . . . .	20	24	16	8	14
Desertion and failure to pay maintenance . . . . .	5	4	6	5	3
Desertion and other . . . . .	6	5	5	4	7
Adultery and separation . . . . .	7	9	1	3	4
Adultery and cruelty . . . . .	8	12	12	16	17
Adultery and other . . . . .	2	3	2	2	2
Separation and other . . . . .	5	5	1	2	3
Cruelty and drunkenness . . . . .	98	126	118	143	160
Cruelty and other . . . . .	3	..	2	7	5
Other dual grounds . . . . .	2	2	2	3	1
Three grounds or more . . . . .	16	16	13	39	15
<i>Total . . . . .</i>	<i>9,859</i>	<i>9,688</i>	<i>10,731</i>	<i>10,930</i>	<i>12,198</i>

<b>NULLITY</b>					
Bigamy . . . . .	21	15	18	12	15
Invalid marriage . . . . .	2	5	2	1	..
Incapacity to consummate . . . . .	22	27	23	28	29
Other grounds . . . . .	5	3	1	3	1
<i>Total . . . . .</i>	<i>50</i>	<i>50</i>	<i>44</i>	<i>44</i>	<i>45</i>

<b>JUDICIAL SEPARATION</b>					
Desertion . . . . .	3	1	1	..	..
Adultery . . . . .	4	5	8	..	2
Cruelty . . . . .	2	2	2	5	..
Other grounds . . . . .	3	..	3	..	2
<i>Total . . . . .</i>	<i>12</i>	<i>8</i>	<i>14</i>	<i>5</i>	<i>4</i>

<b>ALL DECREES</b>					
<i>Grand total . . . . .</i>	<i>9,921</i>	<i>9,746</i>	<i>10,789</i>	<i>10,979</i>	<i>12,247</i>



**Divorced persons at each census, 1911 to 1966**

The following table shows the number and proportion of divorced persons in Australia as recorded from returns supplied at each census from 1911 to 1966. A classification of divorced persons by ages for the censuses from 1891 to 1947 appeared in earlier issues of the Year Book (*see* No. 39, page 269). Before 1911 no record was made of divorced persons in South Australia, so comparisons cannot be made beyond that date.

**DIVORCED PERSONS AT CENSUS DATES: AUSTRALIA, 1911 TO 1966**

Sex	Number							Number per 10,000 of males or females 15 years of age and over							
	1911	1921	1933	1947	1954	1961	1966	1911	1921	1933	1947	1954	1961	1966	
Males	2,368	4,233	10,298	25,052	32,389	38,640	42,885	15	23	42	89	100	105	105	
Females	2,140	4,304	10,888	27,516	36,650	43,339	51,143	15	24	46	96	115	119	125	

**Bankruptcy**

For a description of the provisions of the *Bankruptcy Act* 1966-1969, *see* Year Book No. 55, pages 586-7. The Bankruptcy Act was amended in 1970 to remove any obstacle the Act may present to the operation of compositions or schemes of arrangement entered into under State or Territory legislation providing assistance to farmers in respect of their debts.

**Bankruptcy proceedings**

The following table shows the number of bankruptcies of the various types in each State, together with the disclosed assets and liabilities of the debtors, during 1969-70.

**BANKRUPTCY PROCEEDINGS: STATES AND TERRITORIES, 1969-70**

State or Territory		Sequestration orders and orders for administration of deceased debtors' estates	Compositions	Deeds of assignment	Deeds of arrangement	Total
N.S.W.(a)	Number	536	16	30	24	606
	Liabilities \$	5,571,436	555,711	976,092	702,692	7,805,931
	Assets \$	1,511,233	116,195	373,040	764,884	2,765,352
Vic.	Number	494	18	68	25	605
	Liabilities \$	5,031,504	120,958	1,252,543	678,396	7,083,401
	Assets \$	1,430,735	56,360	1,286,293	480,488	3,253,876
Qld	Number	249	4	18	4	275
	Liabilities \$	2,080,725	4,704	606,753	203,411	2,895,593
	Assets \$	1,180,982	1,416	257,593	145,742	1,585,733
S. Aust.	Number	602	4	12	6	624
	Liabilities \$	2,999,527	99,302	614,267	214,266	3,927,362
	Assets \$	1,485,488	81,141	610,993	119,406	2,297,028
W. Aust.	Number	229	17	13	34	293
	Liabilities \$	1,924,334	225,334	285,132	910,091	3,344,891
	Assets \$	847,280	167,784	288,852	641,845	1,945,761
Tas.	Number	121	..	4	9	134
	Liabilities \$	592,932	..	74,988	193,936	861,856
	Assets \$	359,445	..	64,632	144,682	568,759
N.T.	Number	5	..	..	..	5
	Liabilities \$	42,471	..	..	..	42,471
	Assets \$	5,238	..	..	..	5,238
Australia	Number	2,236	59	145	102	2,542
	Liabilities \$	18,242,929	1,006,009	3,809,775	2,902,792	25,961,505
	Assets \$	6,820,401	422,896	2,881,403	2,297,047	12,421,747

(a) Includes the Australian Capital Territory.

The next table shows Australian figures in respect of each of the various types of bankruptcy, for the years 1965-66 to 1969-70.

## BANKRUPTCY PROCEEDINGS: AUSTRALIA, 1965-66 TO 1969-70

Year		<i>Sequestration orders and orders for administration of deceased debtors' estates</i>	<i>Compositions</i>	<i>Deeds of assignment</i>	<i>Deeds of arrangement</i>	<i>Total</i>
1965-66	Number . . .	2,384	133	23	113	2,653
	Liabilities \$'000	15,106	4,082	634	3,176	22,998
	Assets \$'000	6,488	3,585	725	2,623	13,421
1966-67	Number . . .	2,284	127	18	108	2,537
	Liabilities \$'000	19,108	2,176	535	2,310	24,129
	Assets \$'000	7,685	1,293	308	1,542	10,829
1967-68	Number . . .	2,350	78	35	88	2,551
	Liabilities \$'000	15,222	1,828	1,229	3,330	21,609
	Assets \$'000	6,292	1,189	918	2,010	10,409
1968-69	Number . . .	2,302	52	103	93	2,550
	Liabilities \$'000	15,865	893	3,870	2,641	23,269
	Assets \$'000	7,588	447	2,699	1,674	12,408
1969-70	Number . . .	2,236	59	145	102	2,542
	Liabilities \$'000	18,243	1,006	3,810	2,903	25,962
	Assets \$'000	6,820	423	2,881	2,297	12,422

## The High Court of Australia

The High Court of Australia consists of a Chief Justice and six other Justices. Its principal seat is in Melbourne, but sittings are held in every State capital as occasion requires. The High Court has both original and appellate jurisdiction. Its original jurisdiction is usually exercised by a single Justice, appellate jurisdiction by at least three Justices. The following table sets out transactions in its original and appellate jurisdiction for 1969 and 1970.

## TRANSACTIONS OF THE HIGH COURT OF AUSTRALIA, 1969 AND 1970

<i>Original jurisdiction(a)</i>	<i>1969</i>	<i>1970</i>	<i>Appellate jurisdiction</i>	<i>1969</i>	<i>1970</i>
Number of writs issued . . .	103	63	Number of appeals—		
Number of causes entered for trial . . .	25	38	Set down for hearing . . .	61	87
Judgment for plaintiffs . . .	8	11	Allowed . . .	32	27
Judgments for defendants . . .	1	3	Dismissed . . .	62	67
Otherwise disposed of . . .	20	16	Otherwise disposed of . . .	14	8
Amounts of judgments . . .	\$126,612	\$1,630,034			

(a) Some matters dealt with by the High Court neither originate as writs nor are entered as causes.

During 1969 and 1970, respectively, the High Court dealt also with the following: appeals from assessments under the Taxation Assessment Acts, 55, 153; special cases stated for the opinion of the Full Court, 9, 11; applications for prohibition, etc., 9, 5. The fees collected amounted to \$13,094 in 1969 and \$15,183 in 1970.

## Selected crime reported to police

The following tables show some details of certain categories of offences reported or becoming known to police. This series, which commenced in 1964, is derived from police records and is based, as far as possible, on definitions and procedural arrangements uniformly determined for all States. The following explanations are necessary in order to interpret the figures in this series.

*Offences reported or becoming known.* All incidents reported or becoming known to the police which are found to constitute offences within the scope of the crimes covered are included. Offences are shown as 'reported or becoming known' in the period during which it has been established that the incident constitutes a crime, not necessarily in the period when the incident occurred. However, the incident is included when the police are satisfied that a crime has been committed, even though it may be established in subsequent proceedings that no crime or a crime of a different nature was committed. As far as possible, the offences are recorded in respect of the State in which the incident occurred, regardless of which police force undertakes investigations or prosecutions, or where an arrest is made. In the case of homicide, assault, robbery, and rape, one offence is counted in respect of each victim, regardless of the number of offenders involved. In the case of breaking and entering, and fraud, etc., one offence is counted for each act or series of directly related acts occurring at the same time and place, and under the same circumstances. Each motor vehicle stolen is counted as constituting a separate offence.

*Offences cleared.* An offence of the type included in this series is counted as 'cleared' when an information (charge, arrest or summons to appear) has been laid against at least one person involved. However, an offence may also be counted as 'cleared' without an information being laid. This may occur when the offender has received an official caution or has died, has committed suicide, has been committed to a mental institution, or is in another jurisdiction from which extradition is not desired or available, or is serving a sentence; or if there are other obstacles to prosecution, such as diplomatic immunity or that the complainant refuses to prosecute. A clearance is always shown against the classification under which the offence was 'reported', regardless of the nature of the charge laid or changes in the description of an offence due to later information. The entries are made in respect of the year when the offence was 'cleared', whether or not the offence was 'reported' in that or an earlier year.

*Persons involved in crimes cleared.* This is the sum of the number of persons dealt with in each of the offences shown as 'cleared'. If more than one person is involved in the one offence, each person is counted. If the same person is involved in more than one offence cleared, he is counted separately for each offence. Persons involved are shown against the categories of offences to which an incident was originally allocated, regardless of the actual offences they are charged with. This basis of counting 'persons involved in offences cleared' was adopted to reveal trends in crime participation by persons in various age-groups. The figures in this series are not directly comparable with statistics of persons charged or convicted in court, or of cases brought before the courts; nor do these figures reveal the number of offenders in the community.

### Offences included in the statistics

*Homicide.* Separate details are provided for murder, attempted murder (i.e. acts done with intent to murder) and manslaughter (unlawful killing other than murder), excluding manslaughter arising from motor traffic accidents.

*Serious assault.* These are assaults normally dealt with on indictment. Includes woundings, offences causing bodily harm, assaults with a weapon, etc., and attempts of this nature. Excludes sexual assault and robbery. *Uniform interpretation of this definition between States is especially difficult to effect.*

*Robbery.* Stealing anything, if at or immediately before or after the time of stealing, the offender uses or threatens to use violence to any person or property in order to obtain the thing stolen, or to prevent or overcome resistance to its being stolen. Includes attempts of this nature.

*Rape.* Includes attempted rape and assault with intent to rape. Excludes unlawful carnal knowledge (i.e. where consent is given, but the girl is below the legal age of consent) and indecent assault.

*Breaking and entering.* Breaking and entering a building (or entering a building and breaking out) and committing or intending to commit a crime. Includes burglaries. Separate details are shown according to the type of building involved, namely, *dwellings* (including unoccupied dwellings, tents, caravans, etc., used as dwellings, and the residential parts of hotels, schools, etc.); *shops* (including kiosks, service stations, restaurants, bars, non-residential clubs, etc.); and *offices, factories and warehouses* (including parts of buildings, but excluding dwellings and shops used for such purposes). Includes attempts. From 1967 the figures exclude breakings involving property valued at \$100 or less.

*Motor vehicle thefts, illegal use, etc.* Includes all offences of illegal, unlawful or unauthorised use, use without consent, unlawfully assuming control, etc., no matter under which legislation these offences are prescribed. Excludes cases of 'interference', but includes attempts at illegal use. The number of stolen motor vehicles which are recovered is also shown.



*Fraud, forgery, false pretences.* Includes embezzlement, 'omit to account', misappropriation, fraudulent appropriation, conversion, larceny as bailee, falsification of accounts, company fraud, forgery, uttering, false pretences, passing of valueless cheques and offences by trustees. Includes attempts, but excludes imposition. As a general rule, offences are included only if there is an element of deception or trickery. Separate details are shown for *valueless cheque* offences (i.e. passing of valueless cheques, whether there is no account, insufficient funds or a false signature of the purported drawer of the cheque. However, this sub-group excludes cases where a genuine cheque is altered or the endorsement of the payee is forged. These cases are regarded as forgery and or uttering and included in 'other').

#### Offences reported or becoming known to police

The following table shows, for each State and Territory, the number of offences in each of the seven categories covered by this series which were reported or became known to police during the years 1966 to 1970. The table excludes offences reported to and investigated by the Commonwealth Police, which are shown on page 442.

SELECTED CRIME REPORTED OR BECOMING KNOWN TO POLICE,  
NUMBER OF OFFENCES, STATES AND TERRITORIES, 1966 TO 1970

Category of crime	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Homicide—</b>									
1966 . . . . .	113	106	62	13	14	3	8	2	321
1967 . . . . .	139	57	47	25	7	7	17	1	300
1968 . . . . .	140	52	51	18	14	10	12	3	300
1969 . . . . .	120	66	38	21	12	15	7	1	280
1970 . . . . .	125	107	36	34	15	10	9	3	339
<b>Serious assault(a)—</b>									
1966 . . . . .	522	1,529	82	53	14	3	11	13	2,227
1967 . . . . .	547	1,338	119	71	20	11	39	13	2,158
1968 . . . . .	611	1,600	128	52	60	19	15	23	2,508
1969 . . . . .	626	1,460	134	92	77	47	30	17	2,483
1970 . . . . .	799	2,014	177	87	95	32	46	32	3,282
<b>Robbery—</b>									
1966 . . . . .	346	457	92	50	20	17	4	6	992
1967 . . . . .	386	395	79	51	21	18	5	5	960
1968 . . . . .	544	480	88	79	48	23	6	12	1,280
1969 . . . . .	777	503	106	127	41	23	13	9	1,599
1970 . . . . .	867	744	124	140	69	33	11	11	1,999
<b>Rape—</b>									
1966 . . . . .	72	107	38	16	7	2	8	1	251
1967 . . . . .	72	138	32	43	5	17	2	2	311
1968 . . . . .	95	168	34	43	5	7	7	4	363
1969 . . . . .	126	144	35	32	6	7	7	7	364
1970 . . . . .	136	160	42	21	6	17	29	5	416
<b>Breaking and entering (dwelling, shops, offices, etc.)—</b>									
1966 . . . . .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	(b)56,841
1967(c) . . . . .	7,806	7,656	1,417	1,165	552	340	40	96	19,072
1968(c) . . . . .	11,026	8,069	1,841	1,181	883	422	54	86	23,562
1969(c) . . . . .	11,923	8,215	2,035	1,299	1,368	586	66	105	25,597
1970(c) . . . . .	13,879	9,870	2,538	1,727	1,825	492	68	192	30,591
<b>Motor vehicle theft, etc.—</b>									
1966 . . . . .	12,678	8,969	1,703	1,304	1,572	410	89	212	26,937
1967 . . . . .	12,558	8,348	1,544	1,701	1,707	603	119	211	26,791
1968 . . . . .	13,008	9,352	1,740	1,967	2,084	759	192	196	29,298
1969 . . . . .	16,082	9,343	2,295	1,741	1,895	658	228	250	32,492
1970 . . . . .	18,464	11,246	3,023	2,140	2,700	722	347	284	38,926
<b>Fraud, forgery, etc.—</b>									
1966 . . . . .	5,558	3,779	2,778	1,740	1,052	182	144	276	15,509
1967 . . . . .	5,438	3,367	2,872	2,185	1,256	292	143	270	15,823
1968 . . . . .	6,283	4,402	4,154	1,596	1,476	607	271	166	18,955
1969 . . . . .	5,897	4,554	4,056	2,927	1,924	660	187	210	20,415
1970 . . . . .	7,184	5,438	3,658	3,541	2,048	663	154	179	22,865

(a) See definition on page 439.  
\$100 or less.

(b) All reported breakings, etc.

(c) Excludes offences involving property valued at

#### Crimes cleared and persons involved

The tables which follow show, for the various categories of offences, the numbers of offences reported, the numbers cleared, and the numbers of persons involved according to age and sex. Sub-divisions of the categories homicide, breaking and entering, and fraud, etc., are provided. See pages 438–40 for definitions used and the bases on which these statistics are prepared.

**HOMICIDE: CRIMES REPORTED OR BECOMING KNOWN, CRIMES CLEARED  
AND PERSONS INVOLVED, AUSTRALIA, 1968 TO 1970**

	<i>Murder</i>			<i>Attempted murder</i>			<i>Manslaughter</i>			<i>All homicide</i>		
	1968	1969	1970	1968	1969	1970	1968	1969	1970	1968	1969	1970
Numbers reported or becoming known . . .	143	157	172	114	90	145	43	33	29	300	280	346
Numbers cleared . . .	140	152	160	105	82	139	42	33	29	287	267	328
Persons involved in crimes cleared—												
Aged(a)—												
16 years and under . . .	7	4	15	8	6	7	..	2	1	15	12	23
17 and 18 years . . .	10	8	8	6	6	11	2	7	4	18	21	23
19 and 20 years . . .	12	8	14	8	6	17	6	5	2	26	19	33
21 years and over . . .	136	147	147	98	65	116	38	22	22	272	234	285
Total persons involved . . .	165	167	184	120	83	151	46	36	29	(b)331	(b)286	(b)364

(a) Age last birthday at time of clearance. (b) Includes 44 females in 1968, 54 in 1969, and 51 in 1970.

**SERIOUS ASSAULT, ROBBERY, RAPE: CRIMES REPORTED OR BECOMING KNOWN,  
CRIMES CLEARED, AND PERSONS INVOLVED, AUSTRALIA, 1968 TO 1970**

	<i>Serious assault</i>			<i>Robbery</i>			<i>Rape</i>		
	1968	1969	1970	1968	1969	1970	1968	1969	1970
Numbers reported or becoming known . . .	2,508	2,483	3,282	1,280	1,599	1,999	363	364	416
Numbers cleared . . .	1,987	1,892	2,524	459	648	755	281	286	315
Persons involved in crimes cleared—									
Aged(a)—									
16 years and under . . .	156	176	268	105	182	200	48	30	40
17 and 18 years . . .	267	333	406	160	227	285	99	74	58
19 and 20 years . . .	271	326	449	164	210	238	99	83	73
21 years and over . . .	1,501	1,590	1,884	411	476	566	187	207	223
Total persons involved . . .	(b)2,195	(b)2,425	(b)3,007	(c)840	(c)1,095	(c)1,289	433	394	394

(a) Age last birthday at time of clearance. (b) Includes 106 females in 1968, 110 in 1969, and 119 in 1970.  
(c) Includes 38 females in 1968, 58 in 1969, and 44 in 1970.

**BREAKING AND ENTERING(a): CRIMES REPORTED OR BECOMING KNOWN, CRIMES  
CLEARED, AND PERSONS INVOLVED, AUSTRALIA, 1968 TO 1970**

	<i>Dwellings</i>			<i>Shops</i>			<i>Offices and warehouses</i>			<i>Total</i>		
	1968	1969	1970	1968	1969	1970	1968	1969	1970	1968	1969	1970
Numbers reported or becoming known . . .	11,434	12,258	15,110	6,585	7,215	7,552	5,543	6,124	7,929	23,562	25,597	30,591
Numbers cleared . . .	2,221	1,983	2,306	1,354	1,862	1,885	1,057	1,142	1,253	4,632	4,987	5,444
Persons involved in crimes cleared—												
Aged(b)—												
16 years and under . . .	893	845	1,122	452	553	694	410	422	407	1,755	1,820	2,223
17 and 18 years . . .	394	492	600	400	594	590	239	306	331	1,033	1,392	1,521
19 and 20 years . . .	326	384	387	343	391	421	224	210	221	893	985	1,029
21 years and over . . .	1,427	1,013	1,180	928	1,357	1,175	731	764	890	3,086	3,134	3,245
Total persons involved . . .	3,040	2,734	3,289	2,123	2,895	2,880	1,604	1,702	1,849	(c)6,767	(c)7,331	(c)8,018

(a) Excludes offences involving property valued at \$100 or less. (b) Age last birthday at time of clearance.  
(c) Includes 174 females in 1968, 210 in 1969, and 134 in 1970.

**MOTOR VEHICLE THEFT, ETC., FRAUD, ETC.: CRIMES REPORTED OR BECOMING KNOWN, CRIMES CLEARED, AND PERSONS INVOLVED, AUSTRALIA, 1968 TO 1970**

	<i>Motor vehicles theft, etc.</i>			<i>Fraud, forgery, false pretences</i>								
				<i>Valueless cheques</i>			<i>Other</i>			<i>All frauds, etc.</i>		
	1968	1969	1970	1968	1969	1970	1968	1969	1970	1968	1969	1970
Numbers reported or becoming known . . .	29,298	32,492	38,926	7,787	8,694	9,016	11,168	11,721	13,849	18,955	20,415	22,865
Numbers cleared . . .	6,218	6,772	7,820	5,784	6,643	6,564	9,935	10,601	12,557	15,719	17,244	19,121
Persons involved in crimes cleared—												
Males aged(a)—												
16 years and under . . .	3,747	4,571	5,662	105	177	189	186	404	529	291	581	718
17 and 18 years . . .	2,298	2,753	3,331	186	209	241	235	298	332	421	507	573
19 and 20 years . . .	1,165	1,295	1,300	242	409	332	496	369	513	738	778	845
21 years and over . . .	1,944	1,840	2,035	4,810	5,352	4,887	7,565	7,512	7,507	12,375	12,864	12,394
Total males . . .	9,154	10,459	12,328	5,343	6,147	5,649	8,482	8,583	8,881	13,825	14,730	14,530
Females aged(a)—												
16 years and under . . .	57	86	118	22	43	35	83	132	132	105	175	167
17 and 18 years . . .	39	69	42	26	17	102	140	178	351	166	195	453
19 and 20 years . . .	58	25	39	23	85	86	475	315	255	498	400	341
21 years and over . . .	95	33	34	590	748	1,226	1,065	1,729	3,274	1,655	2,477	4,500
Total females . . .	249	213	223	661	893	1,449	1,763	2,354	4,012	2,424	3,247	5,461
Total persons involved . . .	9,403	10,672	12,561	6,004	7,040	7,098	10,245	10,937	12,893	16,249	17,977	19,991

(a) Age last birthday at time of clearance.

The number of stolen motor vehicles recovered was: 1968, 27,191; 1969, 29,371; 1970, 34,864.

**Offences reported or becoming known to Commonwealth Police.**

In addition to the offences shown in the preceding tables, the following statistics relate to those offences in the selected crime series which were reported to and investigated by the Commonwealth Police in 1970.

	<i>Breaking and Entering</i>	<i>Valueless cheques</i>	<i>Other Fraud</i>
Numbers reported or becoming known . . .	5	1,508	7,466
Numbers cleared . . .	..	275	2,197
Persons(a) involved in crimes cleared—			
Aged(b)—			
16 years and under . . .	..	..	21(3)
17 and 18 years . . .	..	5(2)	16(5)
19 and 20 years . . .	..	11	80(18)
21 years and over . . .	..	257(24)	2,091(585)
Total persons involved . . .	..	273(26)	2,208(611)

(a) Numbers of females are shown in brackets.

(b) Age last birthday at time of clearance.

**Drug offences**

Australia is a signatory to the Single Convention of Narcotic Drugs which has as its main aim the limitation of narcotic drugs to legitimate medical and research purposes.

As its name implies, the Single Convention covers only the so-called narcotic drugs. In recognition that there are other drugs of dependence, the member nations met during 1970 and 1971 and drew up a further Convention to impose controls on psychotropic substances such as hallucinogens, amphetamines, other central nervous system stimulants, barbiturates, tranquillisers and certain other sedatives.

**Legislative provisions**

Regulation 5 of the Customs (Prohibited Imports) Regulations made under Section 50 of the *Customs Act* 1901-1971 provides the legal controls for the importation of narcotic drugs and other drugs of dependence. Under this regulation all importers of these drugs must be licensed and must obtain permission in writing for each importation. Importers are also required to keep these drugs in a secure place and to keep such records as may be required concerning use or disposal.



The penalty on conviction for an offence relating to narcotic drugs as defined in the *Customs Act* 1901-1971 is:

(a) In a Court of Summary Jurisdiction—

A fine not exceeding \$1,000 or imprisonment for a period not exceeding 2 years, or both.

(b) On indictment—

A fine not exceeding \$4,000 or imprisonment for a period not exceeding 10 years, or both.

The penalty on conviction for an offence relating to drugs other than narcotic drugs as defined in the Act is a fine not exceeding \$1,000.

The manufacture of narcotic drugs in Australia is controlled under the *Narcotic Drugs Act* 1967. The Act requires that a manufacturer shall be licensed and shall comply with strict conditions and directions relating to such manufacture and the handling of the drugs concerned. Failure to comply with these requirements constitutes an offence against the Act and the penalty upon conviction for such an offence is the same as under the Customs Act.

State and Territory legislation relating to the regulation, control and prohibition of the sale, use, possession and administering (including smoking) of poisons, restricted substances, drugs of addiction, dangerous drugs and deleterious substances, is listed below.

New South Wales	. . .	Poisons Act, 1966-1967; Summary Offences Act, 1970
Victoria	. . .	<i>Poisons Act</i> 1962
Queensland	. . .	' <i>The Health Acts</i> 1937 to 1967'
South Australia	. . .	Narcotic and Psychotropic Drugs Act, 1970 (formerly Dangerous Drugs Act, 1934-1955); Food and Health Act, 1908-1962; Police Offences Act, 1953-1961
Western Australia	. . .	<i>Police Act</i> , 1892-1967; <i>Poisons Act</i> , 1964
Tasmania	. . .	<i>Dangerous Drugs Act</i> 1959; <i>Alcohol and Drug Dependency Act</i> 1968; <i>Health Services Act</i> 1960
Northern Territory	. . .	<i>Dangerous Drugs Ordinance</i> 1928-1969; <i>Poison Ordinance</i>
Australian Capital Territory	. . .	<i>Poisons and Dangerous Drugs Ordinance</i> 1967

In some States this legislation also provides for the offence of 'trafficking' (where there is possession of a minimum specified quantity of a prescribed substance, prohibited drug, or drug of addiction, such possession being *prima facie* for the offence), and for the offence of being the owner, lessee, or concerned in the management of any premises used for the purposes of drug abuse such as the smoking of opium or indian hemp. Offences of habitually consorting, etc., with reputed drug offenders are also covered under State legislation.

All State Governments have agreed to a uniform code of penalties based on those applicable in Commonwealth legislation. Some State Governments have already taken the legislative action to implement this decision.

### Law enforcement

Law enforcement in respect of drugs is handled by State police forces, the Commonwealth Police Force, and the Department of Customs and Excise. In 1969 a National Standing Control Committee on Drugs of Dependence was established to consider further action by the Commonwealth and States to combat all aspects of the drug problem in Australia and to make recommendations on legislative and administrative action. The Committee is chaired by the Comptroller-General of Customs and its members comprise senior officers of Commonwealth and State police and health authorities.

The National Standing Control Committee on Drugs of Dependence recommended that the Central Crime Intelligence Bureau of the Commonwealth Police serve as the national agency for the systematic collection, evaluation and dissemination of information concerning the illicit drug traffic in Australia. During 1970, the first complete year for which the Central Crime Intelligence Bureau compiled statistics, 2,075 drug offences, for which 1,176 males and 288 females were prosecuted, were reported to the Bureau. Details of the offences and the drugs involved are given in the following table.

## DRUG OFFENCES REPORTED TO THE CENTRAL CRIME INTELLIGENCE BUREAU: 1970

(Source: Commonwealth Police)

Type of drug	Type of offence			Total	Per cent
	Use	Possession (including importation)	Sale or supply		
Amphetamines—					
Dexamphetamine . . . . .	17	45	3	65	3.2
Methylamphetamine . . . . .	31	70	6	107	5.2
Other—Not specified . . . . .	24	101	15	140	6.8
	72	216	24	312	15.2
Barbiturates—					
Nembutal . . . . .	7	45	10	62	3.0
Phenobarbitone . . . . .	4	16	2	22	1.1
Other—Not specified . . . . .	10	58	8	76	3.7
	21	119	20	160	7.8
Cannabis—					
Indian hemp, hashish, marihuana, plants (cannabis), seeds (cannabis) .	301	503	73	877	42.8
Hallucinogenic—					
L.S.D. . . . .	30	59	28	117	5.7
Psilocybin . . . . .	1	12	..	13	0.7
	31	71	28	130	6.4
Narcotics—					
Heroin . . . . .	27	17	5	49	2.4
Morphine . . . . .	145	110	8	263	12.7
Opium . . . . .	17	29	5	51	2.5
Pethidine . . . . .	38	37	7	82	4.0
Other—Not specified . . . . .	48	70	11	129	5.2
	275	263	36	574	26.8
Other—Not specified . . . . .	8	14	..	22	..
Total . . . . .	708	1,186	181	2,075	..
Per cent . . . . .	34.1	57.2	8.7	..	100.0

In 1969 the Commonwealth Bureau of Narcotics was created within the Department of Customs and Excise, as part of the Government's campaign to combat the increasing incidence of illicit trafficking of drugs in Australia. The Bureau operates on a national basis and is made up of three sections:

*Licit Control Section*—responsible for the control of legal importation and exportation of all drugs of dependence as well as controlling the manufacture of narcotic drugs in Australia. The section is also responsible for ensuring that Australia's obligations, as a signatory to the various international conventions on drugs, are complied with.

*Overseas Liaison*—responsible for maintaining an effective system for the exchange of information with overseas law enforcement agencies concerned with the suppression of illicit trafficking in drugs.

*Law Enforcement*—responsible for the prevention of, and investigations into, illegal importation, exportation, and major trafficking of drugs. Its activities are concentrated in co-ordinated operations against importers and major distributors.

The following table shows the types of drugs and amounts seized by the Department of Customs and Excise in the years 1966–1970.

## DRUG SEIZURES BY THE DEPARTMENT OF CUSTOMS AND EXCISE: 1966 TO 1970

Type of drug	Unit	1966	1967	1968	1969	1970
Amphetamines(a)	gram	..	..	..	..	11,379
	tablets	..	..	..	688	..
Barbiturates(a)	tablets	..	..	..	..	2,800
Cannabis	gram	2,036	1,376	5,654	47,809	98,078
plants	..	..	..	..	..	306
reefers	..	..	555	..	251	..
Cocaine	tablets	..	..	..	..	120
L.S.D.	tablets	..	237	..	368	17,611
Narcotics—						
Opium	gram	22,415	21,530	3,660	889	9,950
Heroin	gram	1,582	2,572	1,977	196	1,405
Morphine	gram	..	..	1,387	..	29
	ampoules	..	..	..	8	18
	tablets	..	..	..	..	151
Pethidine	tablets	..	..	..	..	43

(a) Not a prohibited import until 1969.

The number of offenders charged with drug offences by the Department of Customs and Excise, and the sentences imposed in the years 1966 to 1970 are given in the following table. Particulars of all drug offences in 1970 reported to the Central Crime Intelligence Bureau are shown in the table on page 444.

## PROSECUTIONS AND CONVICTIONS UNDER THE CUSTOMS ACT AND THE NARCOTICS DRUGS ACT FOR OFFENCES INVOLVING DRUGS OF DEPENDENCE 1966 TO 1970

(Source: Department of Customs and Excise)

Offence and year	Number of offenders	Number of individual charges	Con- victions on individual charges	Fines imposed		Gaol sentences		Number of bonds granted (a)	Number of charges not proceeded with or dismissed	Number of charges pending
				Number	Amount	Number	Months			
Unlawful possession—					\$					
1966	31	33	31	28	3,440	3	30	..	2	..
1967	50	54	48	29	2,940	17	228½	2	1	5
1968	51	52	46	41	8,820	4	22	1	3	3
1969	61	63	60	50	9,490	5	57	5	1	2
1970	79	82	68	50	18,415	19	220	4	5	9
Unlawful import—										
1966	7	7	7	4	1,250	2	12	1	..	..
1967	11	11	7	4	325	3	8	..	1	3
1968	21	25	15	13	1,615	2	42	..	3	7
1969	32	34	27	20	5,300	7	84	1	..	7
1970	55	62	58	36	15,285	16	238	9	..	4
Other offences—										
1966	..	..	..	..	..	..	..	..	..	..
1967	1	1	..	..	..	..	..	..	1	..
1968	1	1	1	1	500	..	..	..	..	..
1969	5	5	4	3	500	1	6	..	1	..
1970	12	13	12	11	700	..	..	..	1	..

NOTE. Where dual penalties such as a fine and a bond were imposed both are included.

(a) Bonds include suspended gaol sentences and/or other recognisances to be of good behaviour for a specified period.

## Senate Select Committee

On 25 November 1969, by resolution of the Senate, a Select Committee into Drug Trafficking and Drug Abuse was established. The report of the findings of the Senate Select Committee was published in May 1971.

## Police

The primary duties of the police are to prevent crime, to detect and detain offenders, to protect life and property, to enforce the law, and to maintain peace and good order. In addition, they perform many duties in the service of the State, e.g. they act as clerks of petty sessions in small centres, as crown land bailiffs, foresters, mining wardens, and inspectors under the fisheries and various other



Acts. In metropolitan and large country areas they also regulate the street traffic. With the exception of the Commonwealth Police Force and the police in the Northern Territory and the Australian Capital Territory, the police forces of Australia are under the control of the State Governments, but their members perform certain functions for the Commonwealth Governments, such as acting as aliens registration officers and concurrently with Commonwealth Police and other Commonwealth Officers, policing various Commonwealth Acts and Regulations.

Women police perform special duties at places where young women and girls are subject to moral danger, control traffic at school crossings and lecture school children on road safety. They also assist male police as required in the performance of normal police duties.

The strength of the police force and the duties and ranks of the personnel involved in each State and Territory for 1970 are shown in the following table. Comparability between States is affected by differences in the classification of ranks and duties, and known differences between States are mentioned in footnotes.

Also included in the table are statistics of ancillary and civilian staff employed by police departments. Differences between States in the use of such staff are considerable. These differences arise, on the one hand, from differences in the extent to which police make use of such staff for police functions and, on the other hand, in the extent to which such staff are required to undertake additional functions (such as parking control) which are allocated to the police in varying degree between States. There is also some overlap between duties of ancillary and civilian staff as defined in the footnotes to the table.

#### POLICE FORCES AND ASSISTANT STAFF: STATES AND TERRITORIES, 30 JUNE 1970

<i>Duty and rank(a)</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>
<b>POLICE FORCES</b>								
Criminal investigations, plain clothes police, scientific duties—								
Executive officers . . .	2	2	..	1	2	1	..	..
Inspectors . . .	15	12	14	3	5	5	1	1
Sergeants . . .	332	53	158	38	58	16	11	7
Constables(b) . . .	800	586	(c)332	223	126	72	34	19
Total, criminal investigations, etc. . .	1,149	653	(c)504	265	191	94	46	27
Traffic duties—								
Executive officers . . .	2	1	..	1	2	1	..	..
Inspectors . . .	6	9	6	3	4	2	..	1
Sergeants . . .	163	27	38	20	20	7	2	11
Constables(b) . . .	890	522	(c)262	184	130	68	14	63
Total, traffic duties . . .	1,061	559	(c)306	208	156	78	16	75
Other special and general duties—								
Executive officers . . .	25	22	..	9	14	4	..	..
Inspectors . . .	122	100	(d)64	38	14	29	3	8
Sergeants . . .	1,333	207	682	164	191	40	31	35
Constables(b) . . .	3,347	3,037	(c)1,498	1,152	878	407	128	138
Total, other special, etc. . .	4,827	3,366	(c)2,244	1,363	(e)1,097	480	(f)162	(f)181
Not allocated—								
Executive officers whose duties extend beyond one branch . . .	5	3	(g)4	2	(h)4	..	(h)4	2
Inspectors . . .	..	1	..	..	..	..	..	..
Police women . . .	83	68	27	38	30	15	7	5
Trainees and cadets . . .	199	89	136	406	51	34	..	..
Total, not allocated . . .	287	161	167	446	85	49	11	7
Total police force—								
Executive officers . . .	34	(h)28	(g)4	13	(h)22	6	(h)4	2
Inspectors . . .	143	122	84	44	23	36	4	10
Sergeants . . .	1,828	287	878	222	269	63	44	53
Constables(b) . . .	5,037	4,145	(c)2,092	1,559	1,134	547	176	220
Police women . . .	83	68	27	38	30	15	7	5
Trainees and cadets . . .	199	89	136	406	51	34	..	..
Total police force . . .	7,324	4,739	3,221	2,282	1,529	701	235	290

#### ANCILLARY AND CIVILIAN STAFF

Employed by Police Department—								
Ancillary staff(l)								
Full-time . . .	180	107	28	(j)175	..	48	30	..
Part-time . . .	..	4	..	2	105	..	..	..
Civilian staff(k)								
Full-time . . .	(l)842	757	382	84	(m)406	97	19	50
Part-time . . .	..	58	29	7	46	..	..	..

For footnotes see next page.

POLICE FORCES AND ASSISTANT STAFF: STATES AND TERRITORIES, 30 JUNE 1970—  
*continued*

<i>Duty and rank(a)</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>
<b>TOTAL STAFF</b>								
Grand total—								
Full-time . . . . .	8,346	5,603	3,631	2,541	1,935	846	284	340
Part-time . . . . .	..	62	29	9	151	..	..	..

(a) Where more than one duty is involved, officers have been allocated to the category of duties in which the greater part of their time is spent. The allocation of executive officers and inspectors to categories of duties is necessarily somewhat arbitrary and varies from State to State. (b) Includes probationary constables. (c) Excludes probationary constables; included with trainees and cadets. (d) Includes sub-inspectors. (e) Includes officers engaged on motor vehicle examination and testing and licensing drivers. (f) Does not include transport and maintenance; each section undertakes its own transport, and maintenance is done on contract and/or by the government transport pool. (g) Includes 1 commissioner's inspector and 1 chief inspector. (h) Includes 1 chief inspector. (i) Parking police, native trackers, wardresses, etc.; special constables in New South Wales and Tasmania; police reservists in Victoria. (j) Includes clerical workers in the Women Police Auxiliaries. (k) Clerks, typists, artisans, cleaners. (l) Does not include cleaning which is done by the Cleaning Services Branch of the Government Stores Department. (m) Includes 58 cadets whose appointment is not subject to the Police Act.

Ancillary and civilian staff are excluded from the following table.

**POLICE FORCES: STATES AND TERRITORIES, 1966 TO 1970**

<i>30 June—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1966 . . . . .	6,486	4,656	2,975	1,994	1,349	619	157	186	18,422
1967 . . . . .	6,765	4,711	3,056	2,059	1,375	645	151	215	18,977
1968 . . . . .	7,111	4,825	3,083	2,214	1,421	632	172	228	19,686
1969 . . . . .	7,259	4,743	3,179	2,255	1,490	670	195	288	20,079
1970 . . . . .	7,324	4,739	3,221	2,282	1,529	701	235	290	20,321

**Commonwealth Police Force**

The Commonwealth Police Force commenced operations on 21 April 1960, and is the principal agency for the enforcement of the laws passed by the Commonwealth Parliament. It is also responsible for the protection of Commonwealth property and interests at various buildings and establishments under the control of the Commonwealth. This force co-ordinates the work of other Commonwealth investigation and law enforcement agencies and acts on behalf of the United Nations Organization for the suppressing of traffic in women and the suppression of obscene literature.

Under the control of the force is the Australian Police College at Manly, New South Wales, which provides training for officers of various police forces and other agencies in Australia and New Zealand. The force has its Head Office in Canberra and District Offices in each capital city. The strength of the force at 30 June 1970 was 887 policemen and 3 policewomen. At that date there were, in addition, 97 civilian employees.

**Prisons**

**Prisons and prison accommodation**

**PRISONS AND PRISON ACCOMMODATION: STATES AND NORTHERN TERRITORY, 30 JUNE 1969**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
Prisons . . . . .	20	13	8	15	15	1	2	74
Accommodation . . . . .	3,479	2,610	1,255	1,314	1,315	417	185	10,575

There is no gaol in the Australian Capital Territory, but there is a lock-up attached to the police station at Canberra and another lock-up at Jervis Bay where offenders are held for short periods. Prisoners remanded or sentenced by a court in the Australian Capital Territory for more than five days are usually held in New South Wales prisons.

## Convicted prisoners

## CONVICTED PRISONERS: STATES AND TERRITORIES, 1965 TO 1969

30 June—	N.S.W. (a)	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Australia	
								Number	Per 10,000 of popu- lation
1965 . . .	2,957	1,879	949	796	803	210	129	7,723	6.8
1966 . . .	3,140	1,872	995	818	863	259	107	8,054	6.9
1967 . . .	3,334	1,994	1,021	866	1,137	275	112	8,739	7.4
1968 . . .	3,292	2,103	958	926	1,150	281	120	8,830	7.3
1969 . . .	3,327	2,199	1,065	884	1,214	331	177	9,197	7.5

(a) Includes Australian Capital Territory prisoners held in New South Wales prisons.

## Expenditure on law, order and public safety

## Expenditure on law, order and public safety

The following table shows the identifiable expenditure on goods and services of Commonwealth and State public authorities whose activities are primarily directed towards serving the purposes of law, order and public safety. Because of differing legislative and administrative arrangements and differing accounting practices in the various States, the activities covered by the figures are not the same in each State; and the activities covered by the Commonwealth figures differ from those of the States because of the Commonwealth's different responsibilities in this field. The Commonwealth and State figures are therefore not strictly comparable; but they have been compiled by uniform methods, and each series is comparable from year to year.

ALL PUBLIC AUTHORITIES: EXPENDITURE ON LAW ORDER AND PUBLIC SAFETY  
1965-66 TO 1969-70  
(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
Net current expenditure on goods and services—					
Commonwealth Authorities . . . . .	6.9	9.7	11.5	12.9	15.2
State authorities—					
New South Wales . . . . .	52.5	59.6	64.9	71.6	82.9
Victoria . . . . .	33.7	36.9	40.0	43.7	49.0
Queensland . . . . .	19.8	22.6	24.7	27.5	31.1
South Australia . . . . .	10.5	12.2	13.3	14.4	16.0
Western Australia . . . . .	10.1	11.5	12.3	14.8	17.6
Tasmania . . . . .	4.4	4.9	5.9	6.5	7.4
Total States . . . . .	130.9	147.6	161.1	178.6	204.0
Total Current . . . . .	137.9	157.3	172.6	191.5	219.2
Gross fixed capital expenditure—					
Commonwealth authorities . . . . .	0.8	0.6	0.9	1.6	1.5
State authorities—					
New South Wales . . . . .	4.0	4.4	5.3	7.2	9.2
Victoria . . . . .	4.4	4.4	4.6	6.7	4.2
Queensland . . . . .	2.3	2.9	3.2	3.9	4.6
South Australia . . . . .	1.2	1.3	0.8	0.8	1.1
Western Australia . . . . .	0.8	0.8	0.9	1.7	1.3
Tasmania . . . . .	1.2	0.8	0.9	1.2	1.3
Total States . . . . .	13.9	14.6	15.7	21.5	21.7
Total Capital . . . . .	14.7	15.2	16.6	23.1	23.1
Total expenditure . . . . .	152.4	172.5	189.2	214.6	242.3



## Patents, trade marks and designs

### Patents

Patents for inventions are granted under the *Patents Act* 1952–1969, which applies to the Commonwealth of Australia and the Territories of Norfolk Island, Papua and New Guinea. The Act is administered by a Commissioner of Patents. The amending Act of 1969 came into operation on 1 January 1970. Regulations under the Act provide variable fees for lodgment of applications depending on size of specifications and number of claims. The basic fee for lodging an application and complete specification is \$20.00. Examination no longer automatically follows lodgment of applications. The Commissioner may now direct an applicant to request examination in which case the examination fee is \$60.00, or the applicant may request it of his own accord, in which case the fee is \$80.00. If examination is not requested within five years after lodgment, the application lapses.

Annual taxes are payable commencing with a fee of \$8.00 after the expiration of two years from the date of lodgment of the complete specification and rising to \$50.00 after the expiration of 15 years from that date.

#### PATENTS: AUSTRALIA, 1966 TO 1970

	1966	1967	1968	1969	1970
Applications . . . . .	16,007	15,733	16,712	17,446	16,443
Applications accompanied by provisional specifications . . . . .	3,853	3,708	3,899	3,637	3,628
Letters patent sealed . . . . .	6,140	6,356	5,537	7,127	6,130

### Trade marks and designs

Under the *Trade Marks Act* 1955–1966 the Commissioner of Patents is also Registrar of Trade Marks. Provision is made for the registration of users of trade marks and for their assignment with or without the goodwill of the business concerned. A new classification of goods was adopted in 1958, and trade marks registered under repealed Acts are reclassified on renewal. Under the *Designs Act* 1906–1968 the Commissioner of Patents is also Registrar of Designs.

#### TRADE MARKS AND DESIGNS: AUSTRALIA, 1966 TO 1970

	1966	1967	1968	1969	1970
Trade marks—					
Received . . . . .	6,714	7,537	8,301	9,246	9,117
Registered . . . . .	3,272	5,333	4,612	4,809	5,823
Designs—					
Received . . . . .	1,523	1,627	1,769	1,975	2,007
Registered . . . . .	642	1,833	1,614	1,440	1,604

## Copyright

Copyright is regulated by the Commonwealth *Copyright Act* 1968, which came into force on 1 May 1969. On that date Australia ratified its adherence to the Brussels revision of the Berne Copyright Convention and to the Universal Copyright Convention, whereby citizens of member countries are accorded protection by complying with the convention formality requiring proprietors to place on their works the symbol © together with their name and the year of first publication, in such a manner and location as to give reasonable notice of their claim of copyright in the works so identified. The new legislation contains no provision for the registration of copyright, and the Copyright Office ceased to exist on 1 May 1969. Copyright is now administered by the Attorney-General's Department.



## CHAPTER 16

### NATIONAL ACCOUNTS

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially of those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy.

Estimates of national income and expenditure have been compiled by the Bureau since 1944-45 and have been published annually as papers entitled *National Income and Expenditure* accompanying the Commonwealth Budgets. Detailed annual estimates of national income and expenditure on a revised basis were published in *Australian National Accounts, National Income and Expenditure, 1969-70*. Preliminary estimates (less detailed) for 1969-70 were published earlier in a Budget Paper. Quarterly estimates are published in *Quarterly Estimates of National Income and Expenditure*. A supplement to the December quarter 1970 issue of *Quarterly Estimates of National Income and Expenditure* included the first presentation of quarterly series of gross national product and related aggregates at constant prices.

More recently, the Bureau has been engaged in the compilation of input-output tables for the Australian economy. Preliminary tables for the year 1962-63 were published in *Australian National Accounts, Input-Output Tables 1962-63* (Preliminary) (Reference No. 7.9) issued in February 1971. Additional tables and a final report will be released later.

The figures shown on pages 455-62 are as published in *Australian National Accounts, National Income and Expenditure, 1969-70*.

### NATIONAL INCOME AND EXPENDITURE

#### Description of the National Income and Expenditure Accounts

A brief description of the conceptual basis of national accounts is given in this section, but for a more detailed treatment of the concepts and structure of the Australian National Accounts reference should be made to *Australian National Accounts, National Income and Expenditure, 1969-70*.

#### Definition and relationship of the concepts of product, income and expenditure

The main concepts of product, income and expenditure in the Australian National Accounts are defined and expressed in equivalents as follows.

*Gross national expenditure* is the total expenditure within a given period on final goods and services (i.e. excluding goods and services used up in the process of production) bought for use in the Australian economy. It is equivalent to gross national product plus imports of goods and services less exports of goods and services.

*National turnover of goods and services* is the total flow within a given period of final goods and services (i.e. excluding any intermediate usage of goods and services entering the Australian economy from production and imports. This value is equivalent to gross national product plus imports of goods and services or, alternatively, to gross national expenditure plus exports of goods and services.

*Gross national product* is the total market value of goods and services produced in Australia within a given period after deduction of the cost of intermediate usage of goods and services but before deducting allowances for the consumption of capital equipment. Thus gross national product, as here defined, is 'at market prices'. It is equivalent to gross national expenditure plus exports of goods and services less imports of goods and services.

*Gross national product at factor cost* is that part of the cost of producing the gross national product which consists of gross payments to factors of production (labour, land, capital, and enterprise). It represents the value added by these factors in the process of production and is equivalent to gross national product less indirect taxes plus subsidies. *Gross farm product at factor cost* is that part of gross national product at factor cost arising from production in rural industries (excluding forestry). *Gross non-farm product at factor cost* arises from production in all other industries.



*Net national product* is the part of the value added within a given period by factors of production (labour, land, capital, and enterprise) which accrues as income to their suppliers after allowing for the depreciation of capital equipment. It is equivalent to gross national product at factor cost less depreciation allowances.

*National income* is the net income accruing within a given period to Australian residents from their services in supplying factors of production (labour, land, capital, and enterprise) in Australia or overseas. It is equivalent to net national product plus income receivable from overseas less income payable overseas.

*Personal income* is the total income, whether in cash or kind, received by persons normally resident in Australia. It includes both income received in return for productive activity (such as wages, salaries and supplements, incomes of unincorporated enterprises, etc.) and transfer incomes (such as cash social service benefits, interest, etc.). Personal income also includes any property income received by non-profit organisations such as private schools, churches, charitable organisations, etc. However, it excludes any income which might be said to accrue to persons in the form of undistributed company income and retained investment income of life insurance, etc., funds.

#### Framework of accounts and sectors

In the accounts shown in Tables 1 to 7 four internal sectors are distinguished—trading enterprises, financial enterprises, persons and public authorities. In addition, there is an overseas sector which shows a summary of the transactions into which overseas governments, persons and businesses enter with Australian residents. All the sectors (except the overseas sector) engage in productive activity, but in the tables a national production account for the whole economy is shown instead of separate accounts for each sector. Similarly, the tables show only a national capital account for the economy, but a current (or income appropriation) account is shown for each sector. The system of accounts as thus envisaged is a completely articulated system in that a credit in any account must be matched with a corresponding debit in some other account—or in the same account if a complete consolidation of the transactions appropriate to that account has not been carried through.

The framework of sectors and accounts underlying the form of social accounts shown in this Year Book is set out in the following diagram. As stated in the previous paragraph, each sector could be envisaged as having separate production, appropriation and capital accounts, but in the tables compiled for Australia the production and capital accounts have been combined. In the diagram the solid rectangles depict the actual form of the tables, and the remaining rectangles show the full amount of detail which would be needed to provide a complete articulation of the accounts. The appropriate number of each table on pages 455–9 is shown on the left of the diagram.

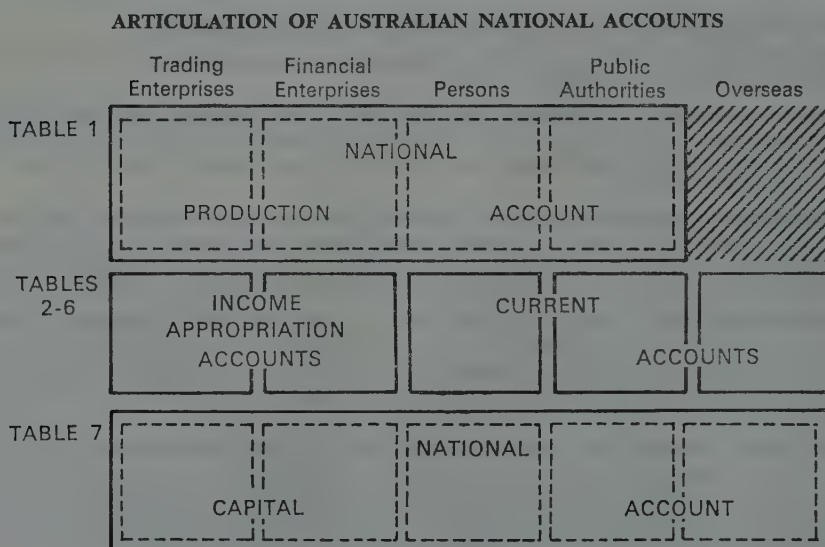


PLATE 30

### Description of the accounts

The *national production account* is a consolidation of the production accounts of all producers regardless of sector. The production account is shown as receiving revenue from the sale of goods and services to final buyers; all intermediate usage of goods and services is cancelled out, since it represents a cost to one producer to offset the revenue of the other. On the payments side are shown the payments of indirect taxes, and, since the account is presented from the point of view of the producing unit, the wages and salaries paid to employees. The balance is the gross operating surplus which is carried to the trading enterprises income appropriation account. In input-output tables, the national production account is broken up into accounts for separate industries, and transactions associated with intermediate usage of goods and services are shown in the production accounts for the separate industries.

The *trading enterprises income appropriation account* is shown as receiving the gross operating surpluses from the national production account and property incomes (dividends, non-dwelling rent and interest) from other sectors. This total of receipts is appropriated to depreciation allowances and to various transfer payments (interest, etc., paid, income tax payable, dividends payable and undistributed income). All net income of unincorporated enterprises is treated as being transferred to persons and the same is true of personal income from dwelling rent. Any income of trading companies not distributed but retained for use in the business is shown as undistributed income and transferred to the national capital account either directly or by way of the overseas current account (where accruing to non-residents).

The *financial enterprises income appropriation account* is, in the main, similar to the preceding account. However, there is no operating surplus, as property income (which is treated as transfer income, not as income of factors of production) is the sole receipt.

The *personal current account* records all receipts on current account whether of factor incomes (wages and salaries) or transfer incomes (interest, etc., dividends, net business incomes, cash benefits from public authorities, and remittances from overseas). On the payments side are shown current payments for goods and services and transfer payments (taxes, interest, etc., remittances to overseas). The balance is transferred to the national capital account under the heading of personal saving.

The *public authorities current account* reflects a distinction between current and capital expenditure, which is necessarily arbitrary in some measure and has been made on the basis of excluding from the current account expenditure on public works and increase in stocks. Expenditure on public works is taken to include new buildings, construction, plant and machinery, and any replacement of assets charged to loan funds or capital works votes. Current account excludes capital expenditure of public enterprises (including replacement of assets charged to depreciation reserves but not those, if any, charged directly to working expenses) and all expenditure on roads, because a satisfactory distinction between new works and maintenance cannot be made. All defence expenditure is included in the current account.

The income of public enterprises shown in this account is derived by deducting from their operating surplus any depreciation shown by these enterprises in their published accounts, except in the case of enterprises whose accounts are included in the Commonwealth or State budgets and are at present analysed on the basis of cash accounts in which depreciation is not allowed. These depreciation allowances are included in the capital account. As in the case of persons, all overseas gifts are included in the current account. These include gifts for international relief, technical assistance, etc., grants, contributions to international organisations and expenditure in connection with the administration of Papua and New Guinea.

The *overseas current account* records all transactions of a current nature between Australian and overseas residents. It should be emphasised that this account is shown here from the point of view of overseas residents, i.e. receipts from Australia are shown as credits, and payments to Australia as debits. Australians temporarily overseas are regarded as residents, and visitors to Australia as non-residents.

Capital transactions of the four domestic sectors and the net deficit on current account with overseas are shown in the *national capital account*. On the receipts side are shown the savings of the various sectors—saving by enterprises, personal saving, the retained investment income of insurance funds, and the public authority surplus on current account. Net apparent capital inflow from overseas and withdrawal from monetary reserves are reflected in the item 'overseas balance on current account'. On the payments side are shown the purchases by all sectors of new buildings and capital equipment and the value of physical changes in stocks. The private component of capital expenditure includes new dwellings, additions and major alterations to dwellings and expenditure of a capital nature by private non-profit institutions (churches, schools, clubs, etc.) but excludes motor vehicles for personal use and other durable consumer goods, which are included in personal consumption expenditure.

### Estimates at constant prices

For certain types of economic analysis it is useful to examine estimates of the principal flows of goods and services in the economy revalued in such a way as to remove the direct effects of changes in their prices which have occurred over the period under review. Such estimates, conventionally described as 'at constant prices', are presented in Table 8 for gross national product, exports and imports of goods and services, and gross national expenditure and its principal components.

In concept, constant price estimates may be thought of as being derived by expressing the value of every component commodity as the product of a price and a quantity, and by substituting for each actual current price the corresponding price in the chosen base year. Aggregates at constant prices for each year are then obtained by summation. In practice, the quality and quantity of the available data are such that a number of methods are used in the preparation of estimates at constant prices. These estimates involve approximations and assumptions, and this should be borne in mind in the interpretation and use of the results.

Gross national product is equivalent to gross national expenditure, plus exports of goods and services, less imports of goods and services. This relationship has been used in deriving the estimates of gross national product at constant prices shown in Table 8. A supplement to the bulletin *Australian National Accounts, National Income and Expenditure*, 1953–54 to 1966–67 entitled *Estimates of Gross Product by Industry at Current and Constant Prices*, 1959–60 to 1965–66 contains estimates of gross national product measured by the 'production method'.

For a considerable part of personal consumption expenditure and exports and imports of goods and services, it is possible to identify specific units of quantity and price, and revalue the quantities at base year prices. Where it is not possible to express the values in successive years as the product of prices and homogeneous units of quantity, the treatment generally adopted is to divide values by appropriate price indexes.

With the remaining components of gross national expenditure, a greater degree of approximation and assumption is involved. For example, when information about the commodity content of a flow is limited (e.g. various components of gross fixed capital expenditure), special purpose price indexes relating to selected commodities are applied to the expenditure on the full range of commodities they represent. In other cases, for instance, where the expenditure relates to 'unique' goods (e.g. goods not homogeneous from year to year), revaluation is achieved by use of an index reflecting the price change of the direct materials and direct labour components of the unique goods in question. This method of revaluation is also applied to current expenditure by financial enterprises and public authorities. The resulting estimates have, therefore, considerable limitations for many uses, for example in studies of productivity.

The method used to estimate the value of physical changes in stocks involves first reducing the increase in book values of stocks by an estimate of the stock valuation adjustment to obtain the measures at current prices, and then revaluing the latter to arrive at the estimates at constant prices. The stock valuation adjustment has to be made because existing stocks are sometimes explicitly revalued (for example, such revaluations are sometimes made by business enterprises so as to show stocks at the lower of cost or market value for balance sheet purposes) or more commonly, because stocks used or disposed of are replaced by new stocks of the same goods but at different prices.

Part 1 of *Australian National Accounts, National Income and Expenditure*, 1969–70 contains a fuller discussion of the conceptual problems involved in making these estimates and Appendix B of that publication contains a brief account of the sources and methods used in preparing the estimates.

### Reliability and revisions

Estimates of national income and expenditure are necessarily prepared from a very wide range of statistical information, some of which is available quickly, some of it only with a delay of several years after the period to which it relates. Some of it is closely related to the desired national income concepts, but some of it is not completely satisfactory in various respects, including coverage, concepts and timing. Estimates, in particular for the most recent years, are therefore subject to revision.

This applies particularly to estimates based on income tax statistics—income of companies, non-farm unincorporated enterprises, depreciation, and part of gross private fixed investment—which are subject to substantial revisions for the last two years, as tabulations of income tax statistics do not become available until about twenty-two months after the end of each financial year.

It is not possible to put precise limits on the degree of revision likely to any particular series, nor to state degrees of reliability in a statistical sense. These depend in large part on the range and quality of the basic statistical data. For illustrations of common causes of revisions reference should be made to *Australian National Accounts, National Income and Expenditure*, 1969–70.



## National income and expenditure tables

Items in tables 1 to 7 are consecutively numbered from 1 to 28, with or without the addition of a letter, and this system is used to identify the corresponding credit and debit entries in the accounts and as a key to the notes on pages 463-6. In some cases the items correspond exactly, while in other cases an entry in one table is the sum of two or more entries in other tables; here the total is given a number, and the components have a number and a letter. In the remaining type of case all entries are given the same number and a distinguishing letter, because in this group one item is not the sum of one or more entries. The relationship between these items can still be traced through because the sum of all credit entries must equal the sum of all debit entries.

TABLE 1  
NATIONAL PRODUCTION ACCOUNT  
(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
1 Wages, salaries, and supplements . . . . .	10,700	11,675	12,697	14,029	15,718
Gross operating surplus of trading enterprises—					
2a Companies . . . . .	2,865	3,172	3,613	4,090	4,644
2b Unincorporated enterprises . . . . .	3,368	3,893	3,556	4,209	4,250
2c Dwellings owned by persons . . . . .	932	1,034	1,147	1,276	1,449
2d Public enterprises . . . . .	681	718	818	920	1,020
Gross national product at factor cost . . . . .	18,546	20,492	21,831	24,524	27,081
3 Indirect taxes less subsidies . . . . .	2,149	2,280	2,487	2,746	3,017
Gross national product . . . . .	20,695	22,772	24,318	27,270	30,098
4 Imports of goods and services . . . . .	3,623	3,693	4,127	4,251	4,733
National turnover of goods and services . . . . .	24,318	26,465	28,445	31,521	34,831
Net current expenditure on goods and services—					
5 Personal consumption . . . . .	12,707	13,645	14,817	15,888	17,335
6 Financial enterprises . . . . .	282	310	332	378	428
7 Public authorities . . . . .	2,422	2,744	3,101	3,394	3,708
Gross fixed capital expenditure—					
8 Private . . . . .	3,653	3,825	4,150	4,686	5,159
9 Public enterprises . . . . .	1,109	1,170	1,313	1,388	1,479
10 Public authorities . . . . .	919	961	1,030	1,122	1,223
11 Value of physical changes in stocks . . . . .	114	361	134	676	475
12 Statistical discrepancy . . . . .	-25	-29	10	97	286
Gross national expenditure . . . . .	21,181	22,987	24,887	27,629	30,093
13 Exports of goods and services . . . . .	3,137	3,478	3,558	3,892	4,738
National turnover of goods and services . . . . .	24,318	26,465	28,445	31,521	34,831
Gross national product at factor cost . . . . .	18,546	20,492	21,831	24,524	27,081
of which—					
Farm . . . . .	1,815	2,264	1,756	2,246	2,087
Non-farm . . . . .	16,731	18,228	20,075	22,278	24,994

TABLE 2  
TRADING ENTERPRISES INCOME APPROPRIATION ACCOUNT  
(\$ million)

		1965-66	1966-67	1967-68	1968-69	1969-70
2	Gross operating surplus . . . . .	7,846	8,817	9,134	10,495	11,363
15b, 17b	Interest, etc., and dividends received . . . . .	141	164	182	215	231
18b	Undistributed income accruing from overseas . . . . .	18	13	20	20	24
	<i>Total receipts</i> . . . . .	8,005	8,994	9,336	10,730	11,618
14a	Depreciation allowances . . . . .	1,816	1,992	2,203	2,407	2,610
15a	Interest, etc., paid . . . . .	960	1,067	1,204	1,380	1,614
	Company income—					
16a	Income tax payable . . . . .	739	813	957	1,104	n.a.
17a	Dividends payable . . . . .	520	631	688	758	n.a.
18a	Undistributed income . . . . .	564	565	665	780	n.a.
	<i>Total company income</i> . . . . .	1,823	2,009	2,310	2,642	2,984
19	Unincorporated enterprises income . . . . .	2,493	2,935	2,507	3,074	3,028
20	Personal income from dwelling rent . . . . .	492	552	611	667	750
21a	Public enterprises income . . . . .	421	439	501	560	632
	<i>Total outlay</i> . . . . .	8,005	8,994	9,336	10,730	11,618

TABLE 3  
FINANCIAL ENTERPRISES INCOME APPROPRIATION ACCOUNT  
(\$ million)

		1965-66	1966-67	1967-68	1968-69	1969-70
15d	Interest, etc., received . . . . .	1,245	1,381	1,546	1,773	2,040
17d, 18d	Dividends received and undistributed income accruing from overseas . . . . .	37	42	48	58	70
	<i>Total receipts</i> . . . . .	1,282	1,423	1,594	1,831	2,110
14b	Depreciation allowances . . . . .	23	27	31	36	42
6	Net current expenditure on goods and services . . . . .	282	310	332	378	428
15c	Interest paid . . . . .	426	465	497	593	699
	Company income—					
16b	Income tax payable . . . . .	51	60	77	89	n.a.
17c	Dividends payable . . . . .	42	47	46	52	n.a.
18c	Undistributed income . . . . .	32	38	60	75	n.a.
	<i>Total company income</i> . . . . .	125	145	183	216	236
21b	Public enterprises income . . . . .	124	133	161	172	195
22	Retained investment income of life insurance funds, etc. . . . .	302	343	390	436	510
	<i>Total outlay</i> . . . . .	1,282	1,423	1,594	1,831	2,110

TABLE 4  
PERSONAL CURRENT ACCOUNT  
(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
1 Wages, salaries and supplements . . . . .	10,700	11,675	12,697	14,029	15,718
15f Interest, etc., received . . . . .	554	577	628	693	789
17e Dividends . . . . .	361	434	486	506	569
19a Unincorporated enterprises income—Farm . . . . .	1,008	1,363	821	1,245	1,051
19b . . . . . Other . . . . .	1,485	1,572	1,686	1,829	1,977
20 Income from dwelling rent . . . . .	492	552	611	667	750
23b Remittances from overseas . . . . .	122	136	156	165	182
25 Cash benefits from public authorities . . . . .	1,179	1,271	1,323	1,443	1,637
<i>Total receipts</i> . . . . .	<i>15,901</i>	<i>17,580</i>	<i>18,408</i>	<i>20,577</i>	<i>22,673</i>
5 Personal consumption expenditure . . . . .	12,707	13,645	14,817	15,888	17,335
15e Interest paid . . . . .	182	187	202	230	261
16c Direct taxes (payable) on income . . . . .	1,655	1,886	2,032	2,368	2,717
16d Other direct taxes, fees, fines, etc. . . . .	255	285	322	366	391
23a Remittances overseas . . . . .	74	79	84	90	111
24 Saving . . . . .	1,028	1,498	951	1,635	1,858
<i>Total outlay</i> . . . . .	<i>15,901</i>	<i>17,580</i>	<i>18,408</i>	<i>20,577</i>	<i>22,673</i>

TABLE 5  
PUBLIC AUTHORITIES CURRENT ACCOUNT  
(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
3a Indirect taxes . . . . .	2,287	2,449	2,681	2,966	3,287
16e Direct taxes (paid) on income . . . . .	2,545	2,725	3,031	3,411	4,046
16d Other direct taxes, fees, fines, etc. . . . .	255	285	322	366	391
15h Interest, etc., received . . . . .	112	114	98	113	137
21 Public enterprises income . . . . .	545	572	662	732	827
<i>Total receipts</i> . . . . .	<i>5,744</i>	<i>6,145</i>	<i>6,794</i>	<i>7,588</i>	<i>8,688</i>
7 Net current expenditure on goods and services . . . . .	2,422	2,744	3,101	3,394	3,708
3b Subsidies . . . . .	138	169	194	220	270
15g Interest, etc., paid . . . . .	538	574	629	672	731
23c Overseas grants and contributions . . . . .	127	151	154	159	180
25 Cash benefits to persons . . . . .	1,179	1,271	1,323	1,443	1,637
26 Grants for private capital purposes . . . . .	57	56	75	46	49
27 Surplus on current account . . . . .	1,283	1,180	1,318	1,654	2,113
<i>Total outlay</i> . . . . .	<i>5,744</i>	<i>6,145</i>	<i>6,794</i>	<i>7,588</i>	<i>8,688</i>



TABLE 6  
OVERSEAS CURRENT ACCOUNT  
(\$ million)

		1965-66	1966-67	1967-68	1968-69	1969-70
4a	Imports f.o.b. . . . .	2,822	2,837	3,159	3,203	3,557
4b	Transportation . . . . .	520	544	636	683	742
4c	Travel . . . . .	122	133	140	150	175
4d	Government transactions . . . . .	62	81	95	111	115
4e	Other goods and services . . . . .	97	98	97	104	144
4	Total imports of goods and services . . . . .	3,623	3,693	4,127	4,251	4,733
15j, 17g	Interest, etc., paid and dividends payable and profits remitted overseas . . . . .	307	350	374	431	492
18f	Undistributed income accruing to overseas residents . . . . .	125	115	227	284	370
23a	Personal remittances overseas . . . . .	74	79	84	90	111
23c	Public authority grants and contributions . . . . .	127	151	154	159	180
	Total credits to non-residents . . . . .	4,256	4,388	4,966	5,215	5,886
13a	Exports f.o.b. . . . .	2,626	2,926	2,941	3,217	3,963
13b	Transportation . . . . .	295	320	362	392	445
13c	Travel . . . . .	58	70	88	108	122
13d	Government transactions . . . . .	77	83	76	80	81
13e	Other goods and services . . . . .	81	79	91	95	127
13	Total exports of goods and services . . . . .	3,137	3,478	3,558	3,892	4,738
15i, 17f	Interest, etc., received and dividends receivable from overseas . . . . .	95	110	109	130	130
18e	Undistributed income accruing from overseas . . . . .	18	13	20	20	24
23b	Personal remittances from overseas . . . . .	122	136	156	165	182
28	Overseas balance on current account . . . . .	884	651	1,123	1,008	812
	Total debits to non-residents . . . . .	4,256	4,388	4,966	5,215	5,886

TABLE 7  
NATIONAL CAPITAL ACCOUNT  
(\$ million)

		1965-66	1966-67	1967-68	1968-69	1969-70
14	Depreciation allowances . . . . .	1,839	2,019	2,234	2,443	2,652
16f, 17h	Increase in dividend and income tax provisions . . . . .	-94	53	48	176	125
18g	Undistributed company income accruing to residents . . . . .	471	488	498	571	503
22	Retained investment income of life insurance funds, etc. . . . .	302	343	390	436	510
24	Personal saving . . . . .	1,028	1,498	951	1,635	1,858
26a	Public authority grants for private capital purposes . . . . .	57	56	75	46	49
27	Public authorities surplus on current account	1,283	1,180	1,318	1,654	2,113
	Overseas balance on current account—					
28a	Withdrawal from overseas monetary reserves(a) . . . . .	-57	124	-79	-148	-37
28b	Net apparent capital inflow . . . . .	941	527	1,202	1,156	849
	<i>Total capital funds accruing . . . . .</i>	<i>5,770</i>	<i>6,288</i>	<i>6,637</i>	<i>7,969</i>	<i>8,622</i>
<hr/>						
	Gross fixed capital expenditure—					
8a	Private—Dwellings . . . . .	911	990	1,111	1,299	1,492
8b	Other building and construction . . . . .	757	735	879	1,012	1,110
8c	All other . . . . .	1,985	2,100	2,160	2,375	2,557
9	Public enterprises . . . . .	1,109	1,170	1,313	1,388	1,479
10	Public authorities . . . . .	919	961	1,030	1,122	1,223
	<i>Total gross fixed capital expenditure . . . . .</i>	<i>5,681</i>	<i>5,956</i>	<i>6,493</i>	<i>7,196</i>	<i>7,861</i>
11	Value of physical changes in stocks—					
	Farm . . . . .	-106	202	-153	351	62
	Other . . . . .	220	159	287	325	413
	<i>Total use of funds . . . . .</i>	<i>5,795</i>	<i>6,317</i>	<i>6,627</i>	<i>7,872</i>	<i>8,336</i>
12	Statistical discrepancy . . . . .	-25	-29	10	97	286
	<i>Total capital funds accruing . . . . .</i>	<i>5,770</i>	<i>6,288</i>	<i>6,637</i>	<i>7,969</i>	<i>8,622</i>

(a) In item 28a minus sign (—) indicates an addition to reserves.

TABLE 8  
 VALUE OF MAIN AGGREGATES AT CURRENT AND AVERAGE 1966-67 PRICES  
 (\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
AT CURRENT PRICES					
Net current expenditure on goods and services—					
Personal consumption . . . . .	12,707	13,645	14,817	15,888	17,335
Financial enterprises . . . . .	282	310	332	378	428
Public authorities . . . . .	2,422	2,744	3,101	3,394	3,708
Gross fixed capital expenditure—					
Private—Dwellings . . . . .	911	990	1,111	1,299	1,492
Other . . . . .	2,742	2,835	3,039	3,387	3,667
Public . . . . .	2,028	2,131	2,343	2,510	2,702
Value of physical changes in stocks . . . . .	114	361	134	676	475
Statistical discrepancy . . . . .	-25	-29	10	97	286
Gross national expenditure . . . . .	21,181	22,987	24,887	27,629	30,093
Plus Exports of goods and services . . . . .	3,137	3,478	3,558	3,892	4,738
Less Imports of goods and services . . . . .	3,623	3,693	4,127	4,251	4,733
Gross national product . . . . .	20,695	22,772	24,318	27,270	30,098
AT AVERAGE 1966-67 PRICES <sup>(a)</sup>					
Net current expenditure on goods and services—					
Personal consumption . . . . .	13,092	13,645	14,364	14,960	15,753
Financial enterprises . . . . .	299	310	322	345	356
Public authorities . . . . .	2,557	2,744	2,960	3,084	3,176
Gross fixed capital expenditure—					
Private—Dwellings . . . . .	937	990	1,079	1,227	1,356
Other . . . . .	2,815	2,835	2,971	3,192	3,322
Public . . . . .	2,117	2,131	2,270	2,337	2,406
Value of physical changes in stocks . . . . .	107	361	147	710	464
Statistical discrepancy . . . . .	-26	-29	10	91	257
Gross national expenditure . . . . .	21,898	22,987	24,123	25,946	27,090
Plus Exports of goods and services . . . . .	3,140	3,478	3,687	3,963	4,705
Less Imports of goods and services . . . . .	3,660	3,693	4,127	4,247	4,677
Gross national product . . . . .	21,378	22,772	23,683	25,662	27,118

(a) See page 454.



TABLE 9  
RELATIONSHIP OF MAIN AGGREGATES  
(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
Net current expenditure on goods and services . . . . .	15,411	16,699	18,250	19,660	21,471
Gross fixed capital expenditure . . . . .	5,681	5,956	6,493	7,196	7,861
Value of physical changes in stocks . . . . .	114	361	134	676	475
Statistical discrepancy . . . . .	-25	-29	10	97	286
<b>Gross national expenditure . . . . .</b>	<b>21,181</b>	<b>22,987</b>	<b>24,887</b>	<b>27,629</b>	<b>30,093</b>
Plus Exports of goods and services . . . . .	3,137	3,478	3,558	3,892	4,738
<b>National turnover of goods and services . . . . .</b>	<b>24,318</b>	<b>26,465</b>	<b>28,445</b>	<b>31,521</b>	<b>34,831</b>
Less Imports of goods and services . . . . .	3,623	3,693	4,127	4,251	4,733
<b>Gross national product . . . . .</b>	<b>20,695</b>	<b>22,772</b>	<b>24,318</b>	<b>27,270</b>	<b>30,098</b>
Less Indirect taxes less subsidies . . . . .	2,149	2,280	2,487	2,746	3,017
<b>Gross national product at factor cost . . . . .</b>	<b>18,546</b>	<b>20,492</b>	<b>21,831</b>	<b>24,524</b>	<b>27,081</b>
Less Depreciation allowances of trading enterprises . . . . .	1,816	1,992	2,203	2,407	2,610
<b>Net national product . . . . .</b>	<b>16,730</b>	<b>18,500</b>	<b>19,628</b>	<b>22,117</b>	<b>24,471</b>
Less Net income payable overseas . . . . .	319	342	472	565	708
<b>National income . . . . .</b>	<b>16,411</b>	<b>18,158</b>	<b>19,156</b>	<b>21,552</b>	<b>23,763</b>
Plus Net income payable overseas . . . . .	319	342	472	565	708
<b>Net national product . . . . .</b>	<b>16,730</b>	<b>18,500</b>	<b>19,628</b>	<b>22,117</b>	<b>24,471</b>
Less Net operating surplus of companies and public enterprises . . . . .	2,493	2,726	3,111	3,537	4,044
Less Interest, etc. paid by unincorporated enterprises and dwellings owned by persons . . . . .	552	612	702	810	931
Plus Interest received by persons . . . . .	554	577	628	693	789
Dividends received by persons . . . . .	361	434	486	506	569
Cash benefits to persons . . . . .	1,179	1,271	1,323	1,443	1,637
Remittances from overseas . . . . .	122	136	156	165	182
<b>Personal income . . . . .</b>	<b>15,901</b>	<b>17,580</b>	<b>18,408</b>	<b>20,577</b>	<b>22,673</b>
Less Direct taxes (payable) on income . . . . .	1,655	1,886	2,032	2,368	2,717
Other direct taxes, fees, fines, etc. . . . .	255	285	322	366	391
<b>Personal disposable income . . . . .</b>	<b>13,991</b>	<b>15,409</b>	<b>16,054</b>	<b>17,843</b>	<b>19,565</b>

TABLE 10  
MAIN AGGREGATES AT CURRENT PRICES, 1948-49 TO 1969-70  
(\$ million)

Year	1	2	3	4	5	6	7 (1 to 6)
	<i>Personal Consumption</i>	<i>Net current expenditure on goods and services by public authorities and financial enterprises</i>	<i>Private gross fixed capital expenditure</i>	<i>Public gross fixed capital expenditure</i>	<i>Value of physical changes in stocks</i>	<i>Statistical discrepancy</i>	<i>Gross national expenditure</i>
1948-49	2,995	395	497	295	37	-35	4,184
1949-50	3,449	474	644	420	72	21	5,080
1950-51	4,197	642	921	603	144	-67	6,440
1951-52	5,001	877	1,132	806	384	61	8,261
1952-53	5,308	1,008	1,143	794	-256	-247	7,750
1953-54	5,827	964	1,320	808	66	-117	8,868
1954-55	6,334	1,041	1,482	871	173	28	9,929
1955-56	6,806	1,166	1,640	927	208	-63	10,684
1956-57	7,274	1,223	1,717	950	-46	-165	10,953
1957-58	7,630	1,264	1,858	998	14	-21	11,743
1958-59	8,029	1,381	1,922	1,100	277	-75	12,634
1959-60	8,799	1,510	2,190	1,205	154	102	13,960
1960-61	9,325	1,621	2,415	1,246	483	43	15,133
1961-62	9,619	1,760	2,327	1,383	-216	-95	14,778
1962-63	10,310	1,871	2,578	1,431	260	-102	16,348
1963-64	11,112	2,048	2,917	1,582	125	-100	17,684
1964-65	12,000	2,337	3,408	1,831	573	39	20,188
1965-66	12,707	2,704	3,653	2,028	114	-25	21,181
1966-67	13,645	3,054	3,825	2,131	361	-29	22,987
1967-68	14,817	3,433	4,150	2,343	134	10	24,887
1968-69	15,888	3,772	4,686	2,510	676	97	27,629
1969-70	17,335	4,136	5,159	2,702	475	286	30,093

Year	8	9	10 (7+8-9)	11	12	13	14
	<i>Exports of goods and services</i>	<i>Imports of goods and services</i>	<i>Gross national product</i>	<i>National income</i>	<i>Personal income</i>	<i>Wages, salaries and supple- ments</i>	<i>Net income payable overseas</i>
1948-49	1,146	979	4,351	3,624	3,736	2,171	81
1949-50	1,307	1,260	5,127	4,189	4,381	2,473	102
1950-51	2,092	1,726	6,806	5,699	5,995	3,115	120
1951-52	1,486	2,437	7,310	6,037	6,242	3,941	126
1952-53	1,855	1,312	8,293	6,983	6,983	4,263	119
1953-54	1,793	1,601	9,060	7,516	7,303	4,542	159
1954-55	1,707	1,983	9,653	7,928	7,813	4,972	164
1955-56	1,740	1,953	10,471	8,543	8,476	5,454	189
1956-57	2,190	1,736	11,407	9,266	9,048	5,769	189
1957-58	1,847	1,925	11,665	9,252	9,037	5,992	187
1958-59	1,868	1,960	12,542	9,939	9,720	6,287	254
1959-60	2,150	2,285	13,825	10,980	10,672	6,977	284
1960-61	2,175	2,604	14,704	11,673	11,457	7,516	264
1961-62	2,470	2,205	15,043	12,016	11,832	7,741	217
1962-63	2,492	2,616	16,224	12,942	12,583	8,170	284
1963-64	3,162	2,866	17,980	14,384	13,912	8,886	305
1964-65	3,048	3,480	19,756	15,828	15,188	9,932	291
1965-66	3,137	3,623	20,695	16,411	15,901	10,700	319
1966-67	3,478	3,693	22,772	18,158	17,580	11,675	342
1967-68	3,558	4,127	24,318	19,156	18,408	12,697	472
1968-69	3,892	4,251	27,270	21,552	20,577	14,029	565
1969-70	4,738	4,733	30,098	23,763	22,673	15,718	708

## Description of items in the National Income and Expenditure Accounts

### Tables 1 to 7

**Item 1. *Wages, salaries and supplements.*** Payments in the nature of wages and salaries as defined for pay-roll tax, including allowances for income in kind (board and quarters, etc.), together with supplements to wages, and pay and allowances of members of the forces. In addition to wages and salaries paid by employers subject to pay-roll tax, this item includes wages and salaries paid by employers not subject to pay-roll tax, based on estimates of employment and average earnings. Supplements consist of employers' contributions to pension and superannuation funds, direct payments of pensions and retiring allowances, and amounts paid as workers' compensation for injuries. Pay and allowances of members of the forces consist of active pay, field, subsistence and dependants' allowances, and the value to the members of the forces of food, clothing, normal medical attention, etc. supplied in kind. They include deferred pay, but exclude war gratuities which are included in item 25.

**Item 2. *Gross operating surplus of trading enterprises.*** The operating surplus, before deduction of depreciation provisions, dividends, interest, rent royalties, and direct taxes payable, but after deducting stock valuation adjustment, of all trading enterprises operating in Australia. Trading enterprises include all companies, public enterprises, partnerships and self-employed persons engaged in the production of goods and services for sale, but exclude financial enterprises. Public trading enterprises are government undertakings which attempt to recover all, or a substantial part, of their costs through charges made to the public for the sale of goods and services. All owners of dwellings are included whether they let the dwellings or occupy them themselves. Trading enterprises' gross operating surplus is shown separately for companies (item 2a), unincorporated enterprises (item 2b), dwellings owned by persons (item 2c), and public enterprises (item 2d).

**Item 3. *Indirect taxes less subsidies.*** Indirect taxes (item 3a) are taxes assessed on producers, i.e. enterprises and public authorities, in respect of the production, sale purchase or use of goods and services, which are charged to the expenses of production. Subsidies (item 3b) are grants made by public authorities to enterprises which are credited to their production accounts. These grants may take the form of bounties on goods produced, payments to ensure a guaranteed price or to enable maintenance of prices of goods or services before cost of production, and other forms of assistance to producers.

**Item 4. *Imports of goods and services.*** The value of goods imported from overseas and amounts payable overseas for services. In table 6 this item is sub-divided into the following components.

**Item 4a. *Imports f.o.b.*** Recorded trade figures adjusted for the purpose of balance of payments estimates. The principal adjustments are the addition of unrecorded imports, including ships and aircraft for use on overseas routes, the subtraction of films imported on a rental basis, imports of gold, passengers' personal effects, goods for repair and goods intended for re-export, and the deduction of a 'valuation adjustment' representing the excess of the recorded value of imports (based on value for duty) over the estimated selling price to the importer as shown on invoices accompanying customs entries.

**Item 4b. *Transportation.*** Freight payable to foreign carriers on goods imported into Australia and transported between Australian ports, fares payable in Australia including fares paid by the Commonwealth government for the carriage of migrants under various assisted passage schemes. It also includes the overseas expenditure of Australian ships and aircraft, and premiums (less claims) on marine insurance payable overseas on imports into Australia, less the net earnings on marine insurance business undertaken by Australian firms in respect of both exports and imports.

**Item 4c. *Travel.*** Expenditure less refunds, by Australians visiting overseas for pleasure and for business, which may take the form of travellers' cheques, letters of credit, etc.

**Item 4d. *Government transactions.*** Expenditure overseas for defence, including the pay and allowances of personnel serving overseas, expenditure overseas on diplomatic, consular and trade representation, government pensions paid abroad, administrative expenditure overseas on immigration, and other miscellaneous payments for services.

**Item 4e. *Other goods and services.*** Cinema and television film rentals payable overseas, expenses of Australian firms transacting business overseas, commissions, brokerage, etc., and the value of repairs on goods previously exported for repair and return, etc.

**Item 5. *Net current expenditure on goods and services—personal consumption.*** Net expenditure on goods and services for purposes of consumption by persons and private non-profit making bodies serving persons. This item excludes the purchase of dwellings and capital expenditure by non-profit making bodies (included in item 8), and maintenance of dwellings (treated as expenses of private



enterprises), but includes personal expenditure on motor vehicles and other durable goods and the imputed rent of owner-occupied dwellings. Purchase of motor vehicles is the estimated expenditure by persons on new motor vehicles, second-hand motor vehicles purchased from business enterprises and public authorities, and net dealers' margins on purchases and sales of motor vehicles within the personal sector. Motor vehicles include cars, station wagons, motor cycles, and motor scooters bought on personal account. The value of income in kind (e.g. food produced and consumed on farms, board and lodging provided free to employees) is included in both personal income and personal consumption expenditure, but goods chargeable to business (expense) accounts are excluded.

*Item 6. Net current expenditure on goods and services—financial enterprises.* The current expenditure of banks, instalment credit companies, short-term money market companies, and building societies after deduction of bank charges to customers. Charges by instalment credit companies are treated as interest receipts and therefore are not offset against expenditure. This item includes wages, salaries and supplements, indirect taxes, and other payments for goods and services. Public financial enterprises are government businesses (mainly banks, including the Reserve Bank) which operate in a manner analogous to other financial enterprises, in that their current expenditure is largely financed by the net receipt of interest. The interest received by government housing authorities is treated as a receipt by public financial enterprises, but their other receipts, including net profit on sale of houses, and all their expenditure, are included in those of public trading enterprises.

*Item 7. Net current expenditure on goods and services—public authorities.* Expenditure by public authorities (not public enterprises) which does not result in the creation of fixed tangible assets or in the acquisition of land, buildings or second-hand goods (other than imported). It comprises expenditure on wages, salaries, and supplements, and on goods and services other than fixed assets and stocks. Fees, etc. charged by public authorities for goods sold and services rendered are offset against purchases. Net expenditure overseas by public authorities and purchases from public enterprises are included. All expenditure on defence is classified as current.

*Item 8. Gross fixed capital expenditure—private.* Expenditure on fixed assets whether for additions or replacements. This item includes expenditure on dwellings (item 8a), other building and construction (item 8b), and vehicles, plant, machinery, etc. (item 8c). It includes also expenditure on second-hand assets as well as new assets, less sales of existing assets. Expenditure on ordinary repair and maintenance of fixed assets is excluded as being chargeable to current account. Major additions are, however, regarded as capital expenditure. Dwellings purchased by persons from public housing authorities are included in private capital expenditure.

*Item 9. Gross fixed capital expenditure—public enterprises.* Expenditure on new fixed assets whether for replacements or additions. This item includes expenditure on dwellings less the book value of houses sold to tenants, other building and construction, vehicles, plant, machinery, etc.

*Item 10. Gross fixed capital expenditure—public authorities.* Expenditure on new fixed assets, whether for replacements or additions, other than for defence purposes. Because it is not possible to clearly distinguish maintenance expenditure, all expenditure on roads is classified as capital expenditure.

*Item 11. Value of physical changes in stocks.* The value of physical changes in stocks of trading enterprises and public authorities. The value of physical changes in stocks is calculated on a quarterly basis as the difference between the beginning and end-of-quarter estimates of stock levels, both revalued at average current-quarter prices by means of appropriate price indexes.

*Item 12. Statistical discrepancy.* The difference between the sum of the direct estimates of gross national product and imports of goods and services on the one hand and the sum of the estimates of components of gross national expenditure and exports of goods and services on the other hand. Conceptually these two totals are the same. Inclusion of the discrepancy on the expenditure side of the national production account implies nothing as to the relative accuracy of the estimates of gross national product and expenditure. Similarly its inclusion in the capital account does not imply that estimates in this table are less accurate than those in other tables, or that capital expenditure estimates are less accurate than estimates on the receipts side of this account.

*Item 13. Exports of goods and services.* The value of goods exported overseas and receipts from overseas for other goods and services. In Table 6 this item is sub-divided into the following components.

*Item 13a. Exports f.o.b.* The recorded trade figures adjusted for balance of payments purposes. The adjustments are similar to those made to the recorded import figures except that no change is made to the basis of valuation.

*Item 13b. Transportation.* The expenditure of overseas carriers in Australian ports, the overseas earnings of ships owned or chartered by Australian operators, and earnings by Australian airlines overseas.



*Item 13c. Travel.* Expenditure less refunds by persons visiting Australia for pleasure or business, which may take the form of travellers' cheques, letters of credit, etc. Includes expenditure in Australia of foreign students studying under the Colombo Plan; and earnings of Australian domestic airlines for the carriage of overseas visitors over Australian domestic air routes.

*Item 13d. Government transactions.* Receipts for services rendered by the Australian Government to other governments and international organisations, and other payments in Australia by foreign governments on defence and other projects, on diplomatic, consular and trade representation, and for pensions paid in Australia.

*Item 13e. Other goods and services.* The value of Australian production of gold less net industrial usage, business expenses of overseas firms in Australia, and commissions, brokerage, etc.

*Item 14. Depreciation allowances.* The financial provisions made for depreciation which are deducted to obtain net income. The estimates represent, in the main, amounts allowed under income tax legislation, but include also the estimated depreciation on tenanted and owner-occupied dwellings and provisions made by public enterprises. This item is divided into depreciation allowances of trading enterprises (item 14a) and of financial enterprises (item 14b).

*Item 15. Interest, etc.* Comprises interest, non-dwelling rent and royalties. This item appears in most accounts as receipts and payments of interest, etc., but in the case of some entries the amounts are combined with dividends and overseas profits. The item is shown net of intra-sector receipts and payments. Payment of interest, etc. by public enterprises is included in item 15g. Payment of interest, etc., by trading enterprises (item 15a) includes interest charged on borrowings for the purchase of houses by persons, which is treated as an appropriation from the gross operating surplus of dwellings owned by persons. Non-dwelling rent includes only actual payments and is estimated net of the expenses of the owner of the premises on rates, maintenance, etc., which are treated as working expenses of the enterprises renting the building. Royalties include mining and forestry royalties paid to public authorities, and royalties and fees for use of trade marks, patents, etc. paid overseas.

*Item 16. Direct taxes, fees, fines, etc.* Income tax payable by trading and financial companies (items 16a and 16b) and persons (item 16c) are amounts payable at rates of taxation applicable in each year. Income tax payable by companies in respect of the most recent year's income is estimated on the basis of rates of tax applicable in respect of the preceding year's income. The difference between the amounts of income tax payable and the cash receipts by public authorities (part of item 16e) is included in item 16f. Income tax payable by persons (item 16c) includes the total income tax payable by individuals on all forms of income whether wages, business income or property income. Estate and gift duties are included in item 16d and are the amounts actually paid by persons in that year. All other taxes, fees for services of a regulatory character, fines and gifts paid by persons to public authorities are also included in item 16d.

*Item 17. Dividends.* All receipts and payments of dividends, including dividends payable overseas and the remitted profits of Australian branches of overseas enterprises. Dividends payable (items 17a and 17c) are the dividends declared by trading and financial companies in respect of the year (including an estimate of dividends to be declared in respect of the most recent year). Receipts of dividends (other than dividends receivable from overseas subsidiaries) are cash receipts, and the difference between the amounts payable and received is included in item 17h. The items are shown net of intra-sector receipts and payments.

*Item 18. Undistributed income.* The undistributed income of companies comprising trading enterprises (item 18a) and financial enterprises (item 18c) is the balance of total company income, including profits receivable from overseas (items 18b and 18d) after deduction of income tax and dividends payable, and is equal to the sum of undistributed income accruing to overseas residents (item 18f) and undistributed company income accruing to residents (item 18g). Profits receivable from overseas is the unremitted part of profits earned by overseas branches of Australian companies and undistributed profits of overseas subsidiaries of Australian companies. Undistributed income accruing to residents (item 18g) is estimated as a balancing item and includes the net effect of any errors or inconsistencies in the estimation of company income and appropriations thereof, including undistributed income accruing to overseas residents.

*Item 19. Unincorporated enterprises income.* The gross operating surplus of unincorporated enterprises less depreciation allowances and interest, etc. paid. It comprises the income of farm unincorporated enterprises (item 19a) and the income of all other unincorporated enterprises (item 19b).

*Item 20. Personal income from dwelling rent.* The gross operating surplus of dwellings owned by persons less depreciation allowances and interest, etc. paid.

*Item 21. Public enterprises income.* Includes income of public trading enterprises (item 21a) and income of public financial enterprises (item 21b). For trading enterprises it is equal to gross operating

surplus after the deduction of depreciation allowances; for financial enterprises it is the net income after depreciation allowances, interest paid, and net current expenditure on goods and services by government banks are deducted from total receipts of interest and non-dwelling rent. Depreciation allowances deducted in arriving at the income of public trading enterprises are those shown in their published accounts, except in the case of enterprises whose accounts are included in the Commonwealth or State budgets and are analysed on the basis of their cash accounts (in which depreciation is not charged).

*Item 22. Retained investment income of life insurance funds, etc.* Total dividends, interest, etc., received by life insurance and superannuation funds, less rent and interest paid, depreciation allowances, income tax and dividends payable.

*Item 23. Overseas grants, contributions and remittances.* All transfers to or from overseas on public authority or private account which are not payments for goods and services or payments of dividends, interest, etc.

*Item 23a. Personal remittances overseas.* Gifts of money by resident persons and private institutions, payments for sustenance, and transfers of emigrants' funds and legacies from Australia to overseas, together with the value of goods exported as gifts.

*Item 23b. Personal remittances from overseas.* Gifts of money received from non-resident persons and private institutions, receipts for sustenance, and transfers of immigrants' funds and legacies from overseas to Australia, together with the value of goods imported as gifts.

*Item 23c. Public authority overseas grants and contributions.* Grants to, and payments made on behalf of the Territories of Papua and New Guinea, and expenditure overseas in respect of technical assistance and relief under the Colombo Plan and United Nations projects. Includes contributions to United Nations and other international organisations due by virtue of membership of these organisations.

*Item 24. Personal saving.* The excess of personal income over the sum of personal consumption expenditure, interest paid, income tax payable, other direct taxes, fees, fines, etc., and remittances overseas. Personal saving is estimated as the balancing item in the personal current account. It includes saving through life insurance and superannuation funds (defined as premiums, etc. paid less claims, etc. received and administrative expenses of life insurance offices) and the increase in assets of marketing authorities. Personal saving may also take the form of increases in holdings of cash and net purchases of securities, the net increase in bank deposits less advances, the reduction in the outstanding advances of instalment credit companies to persons and unincorporated enterprises, and the increase in the equity of persons in dwellings and in capital equipment, buildings and stocks of unincorporated enterprises.

*Item 25. Cash benefits.* Current transfers to persons from public authorities in return for which no services are rendered or goods supplied. Principal components are scholarships; hospital, medical, pharmaceutical, maternity, sickness, and unemployment benefits; child endowment; widows', age, invalid, and repatriation pensions; and attendance money for waterside workers.

*Item 26. Grants for private capital purposes.* Grants to meet part of the costs of private capital expenditure, e.g. Commonwealth Home Savings grants, grants towards construction of science laboratories and libraries in private schools and of houses for aged persons, payments under the Currency Act in relation to the conversion of accounting and other machines following introduction of decimal currency; and compensation to primary industry marketing authorities for losses on overseas debts resulting from sterling devaluation.

*Item 27. Public authorities surplus on current account.* The excess of current revenue, including income of public enterprises, over current outlay. Current outlay includes current expenditure on goods and services, as defined in item 7, and transfer payments (interest, cash benefits, subsidies, grants for private capital purposes, and overseas grants). The surplus is transferred to the capital account where it is shown as part of total funds available for financing capital outlay.

*Item 28. Overseas balance on current account.* The excess of payments to the rest of the world on current account over receipts from the rest of the world on current account. In the national capital account it is shown divided into drawings on Australia's overseas monetary reserves (item 28a) and net apparent capital inflow (item 28b).

## CHAPTER 17

### PRIVATE FINANCE

Further information on the subjects dealt with in this chapter is contained in the annual bulletins *Banking and Currency* and *Insurance and Other Private Finance*. Current information is contained in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics* (monthly), and the following mimeographed statements: monthly—*Monthly Bulletin of Banking Statistics*; *Banking Statistics* (preliminary statement); *Savings Bank Statistics* (preliminary statement); *Savings Banks Housing Finance Transactions within Australia* (preliminary statement); *Life Insurance Statistics*; *Finance Companies*; *Instalment Credit for Retail Sales* (preliminary statement); *Permanent Building Societies*; quarterly—*Instalment Credit for Retail Sales*; *New Capital Raisings by Companies in Australia* (bulletin and preliminary statement); *Capital and Maintenance Expenditure by Private Business in Australia*; *Unit Trusts, Land Trusts and Mutual Funds*. Other relevant annual mimeographed bulletins are *Life Insurance*; *Australian Fire, Marine and General Insurance Statistics*; *Government Pension and Superannuation Schemes*; *Survey of Selected Private Pension Funds*; *Finance Companies*; and *Registered Building Societies*.

### CURRENCY

Until 13 February 1966 the Australian currency unit was the pound (£) divided into 20 shillings (s) each of 12 pence (d). A decimal currency system was introduced in Australia on 14 February 1966 based on a major unit—the dollar—equal to ten shillings in the old currency. The minor unit—the cent—is one-hundredth part of the major unit and is equal to 1.2 pence in the old currency. Decimal notes and coins became legal tender from 14 February 1966. The par value of the Australian dollar under the terms of the International Monetary Fund, was established at 0.99531 grams of fine gold.

The *Reserve Bank Act* 1965 authorised the Reserve Bank of Australia to issue Australian notes in denominations of \$1, \$2, \$5, \$10, \$20, or \$50, or in any other denomination that the Treasurer, by instrument of writing published in the Gazette, determines. All Australia's coin requirements are met by the Royal Australian Mint, Canberra.

For additional information on note issue and coinage refer to List of Special Articles, etc., at end of this Year Book.

#### RESERVE BANK OF AUSTRALIA: NOTE ISSUE DEPARTMENT LIABILITIES AND ASSETS, 30 JUNE 1969 AND 1970 (\$ million)

Liabilities	1969	1970	Assets	1969	1970
Notes on issue(a) . . .	1,091.5	1,195.8	Gold and balances held abroad (including money at short call) . . .	164.5	189.9
Special reserve—			Other overseas securities . . .	198.5	168.0
Premium on gold sold . . .	..	..	Government securities (including Commonwealth Treasury bills) . . .	457.3	606.1
Other liabilities(a) . . .	45.9	62.5	Balances with Central Bank . . .	303.6	279.5
			Other assets . . .	13.5	14.9
<b>Total . . .</b>	<b>1,137.4</b>	<b>1,258.3</b>	<b>Total . . .</b>	<b>1,137.4</b>	<b>1,258.3</b>

(a) Notes of a denomination not exceeding one pound (\$2) which have been on issue for more than twenty years and notes of a denomination exceeding one pound (\$2) which have been on issue for more than forty years are not included in the item 'Notes on issue' but are included in the item 'Other liabilities'.

In accordance with provisions of the *Reserve Bank Act* 1959–1966 the net profits of the Note Issue Department of the Reserve Bank are paid to the Commonwealth Revenue Fund. Net profits in 1968–69 and 1969–70 amounted to \$23,786,243 and \$36,342,930 respectively.



## AUSTRALIAN NOTES IN CIRCULATION, JUNE 1966 TO 1970

(\$'000)

	<i>Last Wednesday in June—</i>				
	1966	1967	1968	1969	1970
\$1 and 10s . . . .	32,204	33,214	34,881	37,528	40,400
\$2 and £1 . . . .	138,164	127,997	117,929	117,281	118,500
\$5 . . . . .	..	42,829	57,444	64,088	73,307
\$10 and £5 . . . .	369,247	389,201	401,079	441,276	474,004
\$20 and £10 . . . .	309,713	344,943	394,667	447,245	509,271
£20 . . . . .	2	1	1	1	1
£50 . . . . .	43	43	42	42	41
£100 . . . . .	41	40	40	40	37
<b>Total . . . . .</b>	<b>849,414</b>	<b>938,269</b>	<b>1,006,083</b>	<b>1,107,500</b>	<b>1,215,561</b>
<i>Held by banks . . . .</i>	<i>154,117</i>	<i>162,006</i>	<i>159,726</i>	<i>164,867</i>	<i>165,202</i>
<i>Held by public . . . .</i>	<i>695,298</i>	<i>776,263</i>	<i>846,357</i>	<i>942,632</i>	<i>1,050,359</i>

## AUSTRALIAN DECIMAL COIN: COSTS OF COIN ISSUED, 1966-67 TO 1969-70

(\$'000)

	<i>Cost of metal</i>	<i>Cost of minting</i>	<i>Freight and sundry charges</i>	<i>Total cost</i>	<i>Face value of coin issued</i>	<i>Surplus</i>
<b>Silver—</b>						
1966-67 . . . .	3,808	170	34	4,012	4,869	857
1967-68 . . . .	1,350	80	2	1,432	1,671	239
1968-69 . . . .	..	..	..	..	..	..
1969-70 . . . .	..	..	..	..	..	..
<b>Cupro-nickel—</b>						
1966-67 . . . .	772	835	145	1,752	14,406	12,654
1967-68 . . . .	1,341	1,732	43	3,116	20,243	17,127
1968-69 . . . .	1,044	1,320	72	2,436	13,008	10,572
1969-70 . . . .	1,226	1,297	68	2,591	19,412	16,821
<b>Bronze—</b>						
1966-67 . . . .	543	930	110	1,583	2,714	1,131
1967-68 . . . .	407	589	36	1,032	1,823	791
1968-69 . . . .	511	745	24	1,280	2,296	1,016
1969-70 . . . .	574	675	28	1,277	2,000	723
<b>Total—</b>						
1966-67 . . . .	5,123	1,935	289	7,347	21,989	14,642
1967-68 . . . .	3,098	2,401	81	5,580	23,737	18,157
1968-69 . . . .	1,555	2,065	96	3,716	15,304	11,588
1969-70 . . . .	1,800	1,972	96	3,868	21,412	17,544

AUSTRALIAN DECIMAL COIN: VALUE OF COIN ISSUED  
30 JUNE 1966 TO 1970

(\$'000)

<i>Year ended 30 June—</i>	<i>50 cents</i>	<i>20 cents</i>	<i>10 cents</i>	<i>5 cents</i>	<i>2 cents</i>	<i>1 cent</i>	<i>Total</i>
1966 . . . . .	11,607	5,960	2,979	1,490	4,234	3,134	29,404
1967 . . . . .	4,869	10,420	1,073	2,913	2,043	671	21,989
1968 . . . . .	1,671	11,206	6,099	2,938	1,118	705	23,737
1969 . . . . .	..	6,307	3,854	2,847	1,390	906	15,304
1970 . . . . .	9,038	5,053	3,074	2,247	1,121	879	21,412



## VOLUME OF MONEY: AUSTRALIA, JUNE 1966 TO 1970

(Source: Reserve Bank of Australia)

(\$ million)

June—		Notes and coin in hands of public	Deposits of public with all trading banks(a)		Deposits with all savings banks(b)	Total volume of money
			Current	Fixed		
1966	. . . . .	783	3,033	1,898	5,223	10,938
1967	. . . . .	882	3,192	2,026	5,724	11,824
1968	. . . . .	964	3,450	2,191	6,200	12,805
1969	. . . . .	1,065	3,685	2,542	6,682	13,974
1970	. . . . .	1,187	3,798	2,763	7,090	14,837

(a) Excludes Government and inter-bank deposits, but includes deposits of the public with the Reserve Bank. (b) Interpolated 'weekly average' based on end of month figures.

## Gold receipts, issues and price

Since early in the 1939-45 War all gold has been acquired by the Reserve Bank, and the export and use of gold has been subject to regulation by the Commonwealth Government. All trading banks in Australia, the Deputy Master of the branch of the Royal Mint in Perth, and three private refining companies are authorised under the Banking (Gold) Regulations to deal in gold on behalf of the Reserve Bank. The Melbourne Mint ceased to deal in gold in 1964. The Royal Australian Mint at Canberra is not authorised to receive and issue gold.

The average price of gold in Australia is fixed by the Reserve Bank and at present reflects the parity value of Australian currency established in conformity with the *International Monetary Agreements Act 1947*. The average price paid for gold delivered to the Reserve Bank of Australia or to persons authorised by the Bank to purchase gold is fixed by the Reserve Bank of Australia, and has been \$31.25 per fine ounce since 1 May 1954.

In December 1951 arrangements were made whereby producers could sell a proportion of newly-mined gold for industrial purposes on overseas premium markets. Under these arrangements gold is acquired by the Reserve Bank in the usual manner and sold, at the Bank's buying price, to an association representing gold producers participating in the scheme. The association pays the Bank's handling charges and the costs of preparation of the gold and makes arrangements for export and sale. Profits earned by the association after meeting administrative expenses are distributed to members in proportion to the quantity of gold delivered to the Reserve Bank. Until August 1952, when permission was given for the export of fine gold, gold exported under this arrangement was not to exceed a fineness of 22 carats (11/12ths).

The average prices per fine ounce in Australian currency obtained for gold exported under this scheme for each month during 1969-70 were July \$36.428; August \$36.192; September \$38.266; October \$31.295; November \$32.293; December \$34.041; January \$31.635; February \$31.899; March \$31.729; April \$31.849; May \$31.396; and June \$31.464.

## OVERSEAS EXCHANGE RATES(a): PAR OF EXCHANGE AND AVERAGE TELEGRAPHIC TRANSFER SELLING RATES FOR SYDNEY ON OVERSEAS COUNTRIES, 1969-70

Country	Basis of quotation	Australian decimal currency equivalents		Country	Basis of quotation	Australian decimal currency equivalents	
		Par of exchange (b)	Selling rate 1969-70			Par of exchange (b)	Selling rate 1969-70
Belgium . . . . .	Francs to \$A1 . . . . .	56.00	55.22	Netherlands . . . . .	Guilders to \$A1 . . . . .	4.054	4.015
Canada . . . . .	Dollars to \$A1 . . . . .	(c)	1.1930	New Zealand . . . . .	\$A to \$NZ1 . . . . .	1.00	1.0020
Ceylon . . . . .	Rupees to \$A1 . . . . .	6.667	6.587	Norway . . . . .	Kroner to \$A1 . . . . .	8.000	7.92
China (mainland) . . . . .	New Yuan to \$A1 . . . . .	(d)	2.72	Pakistan . . . . .	Rupees to \$A1 . . . . .	5.333	5.285
China (Taiwan) . . . . .	Dollars to \$A1 . . . . .	(e)	44.62	Portugal . . . . .	Escudos to \$A1 . . . . .	32.200	31.68
Denmark . . . . .	Kroner to \$A1 . . . . .	8.40	8.32	Singapore . . . . .	Dollars to \$A1 . . . . .	3.429	3.399
Fiji . . . . .	\$A to \$F1 . . . . .	(d)	1.0288	South Africa . . . . .	Rands to \$A1 . . . . .	0.800	0.795
Finland . . . . .	Markkas to \$A1 . . . . .	4.704	4.67	Spain . . . . .	Pesetas to \$A1 . . . . .	78.400	77.35
France . . . . .	Francs to \$A1 . . . . .	6.221	6.082	Sweden . . . . .	Kronor to \$A1 . . . . .	5.794	5.737
Germany, Fed. . . . .	Deutsche Marks . . . . .			Switzerland . . . . .	Francs to \$A1 . . . . .	(d)	4.781
Rep. of . . . . .	to \$A1 . . . . .	4.099	4.159	United Arab . . . . .			
Greece . . . . .	Drachmae to \$A1 . . . . .	33.589	32.95	Republic . . . . .	£E to \$A1 . . . . .	0.390	0.469
Hong Kong . . . . .	Dollars to \$A1 . . . . .	(d)	6.740	United Kingdom . . . . .	\$A to £stg1 . . . . .	2.143	2.1514
India . . . . .	Rupees to \$A1 . . . . .	8.400	8.330	United States of . . . . .			
Italy . . . . .	Lire to \$A1 . . . . .	700.00	696.00	America . . . . .	Dollars to \$A1 . . . . .	1.120	1.1127
Japan . . . . .	Yen to \$A1 . . . . .	403.20	396.96	U.S.S.R. . . . .	Roubles to \$A1 . . . . .	(d)	1.004

(a) Based on rates quoted daily by the Commonwealth Trading Bank of Australia, or where these were not available, rates used by the Department of Customs and Excise in converting import values to \$A for purposes of calculating customs duty. (b) As at 30 June 1969, established under International Monetary Fund Agreement. (c) Exchange rate allowed to fluctuate, no par value fixed. (d) Not a member of the International Monetary Fund. (e) No par value established.

## BANKING

The Australian banking system has developed along the lines of the British system with widespread branch banking conducted by relatively few banks.

### Development since federation

With federation in 1901 the new Commonwealth Parliament was given power, under Section 51 of the Commonwealth Constitution, to legislate with respect to 'Banking, other than State Banking, also State Banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money'. In 1911 the Commonwealth entered the field of banking, with the establishment of the Commonwealth Bank of Australia, which conducted both trading bank and savings bank operations. A separate Commonwealth Savings Bank was established in 1928.

### Central bank

Central banking functions of the Commonwealth Bank developed gradually over the years prior to and during the second world war. In November 1935 a Royal Commission was appointed by the Commonwealth Government to inquire into the monetary and banking systems in operation in Australia and to report whether any, and if so what, alterations were desirable in the interests of the people of Australia as a whole, and the manner in which any such alterations should be effected. The Commission presented its report in July 1937, and a summary of the recommendations appears in Year Book No. 31, page 1010.

In 1945 the Commonwealth Government legislated to give full legal effect to the central banking functions already being exercised by the Commonwealth Bank of Australia and to regulate the banking system as a whole. The Commonwealth Bank of Australia further developed mainly as a central bank when from 3 December 1953 the Commonwealth Trading Bank of Australia was established to take over most of the general trading bank functions of the Commonwealth Bank of Australia.

Legislation in 1959 completed the separation of the trading and central banking functions of the Commonwealth Bank of Australia with the establishment of the Commonwealth Development Bank of Australia under the *Commonwealth Banks Act 1959* to take over the Industrial Finance Department and Mortgage Bank Department of the Commonwealth Bank of Australia.

A new bank, the Reserve Bank of Australia, was established under the *Reserve Bank Act 1959* as the nation's central bank to administer the provisions of a new banking Act (*Banking Act 1959*). A statutory corporation, the Commonwealth Banking Corporation, was set up under the *Commonwealth Banks Act 1959* to control the Commonwealth Trading Bank of Australia, the Commonwealth Development Bank of Australia, and the Commonwealth Savings Bank of Australia.

### Trading banks

Commercial banking in Australia is predominantly carried on by seven major trading banks. One of these banks is owned by the Commonwealth Government and six are privately owned companies established by Act or Charter or incorporated under State or British law. Since 1945 no new private trading banks may be established without the approval of the Commonwealth. As from 1 October 1970, the Australia and New Zealand Banking Group Limited took over the banking business of the Australia and New Zealand Bank and the English, Scottish and Australian Bank. The Rural Bank of New South Wales, the State Bank of South Australia and the Rural and Industries Bank of Western Australia are State-owned banks which operate only in their respective States. The Bank of Queensland Limited confines its operations to the Brisbane area, and three foreign banks, Bank of China, Bank of New Zealand and Banque Nationale de Paris operate on a restricted basis.

### Term Loan Fund

Lending by trading banks is generally conducted on an overdraft basis. A departure from this practice followed discussions during 1961–62 involving the Commonwealth Government, the Reserve Bank and the major trading banks, which resulted in arrangements whereby the banks agreed to create a fund known as the Term Loan Fund, the resources of which would be employed to make loans for capital expenditure on production in the rural, industrial and (to a lesser extent) commercial fields and to finance exports. The loans would be made for fixed terms, varying usually between three and eight years. The term lending arrangements operated from April 1962.

### Farm Development Loan Fund

Discussions in March 1966 between the Commonwealth Government, the Reserve Bank and the major trading banks resulted in the establishment of a fund known as the Farm Development Loan

Fund, from which resources would be available to provide rural producers, particularly smaller producers, with greater access to medium and long-term finance. The Fund was established in April 1966.

### Savings banks

Until 1956 savings bank operations were, apart from two small trustee banks in Tasmania, conducted by the Commonwealth Government and some State Governments. In January 1956 private savings banks were established as subsidiary companies by two of the private trading banks. By mid-1962 all the major private trading banks had established savings bank subsidiary companies. As from 1 October 1970, the Australia and New Zealand Savings Bank Limited took over the banking business of the E.S.&A. Savings Bank Limited.

### Development banks

The Commonwealth Development Bank of Australia was established by the *Commonwealth Banks Act 1959* and commenced operations on 14 January 1960. The Australian Resources Development Bank was established by the major trading banks with the support of the Reserve Bank of Australia and commenced operations in February 1968. For further information on these banks see page 493 and page 494 respectively.

### Current legislation

Operations of banks and banking in Australia are currently governed by (i) Commonwealth legislation enacted in 1959 in respect of banking other than State banking, and (ii) State legislation relating to the incorporation of banks and management of State banks.

#### *Commonwealth banking legislation*

(a) The *Banking Act 1959-1967* provides for the regulation of banking and for the protection of the currency and the public credit of the Commonwealth. This Act, which replaced the *Banking Act 1945-1953*, was assented to on 23 April 1959 and came into operation on 14 January 1960 as the *Banking Act 1959*. It was amended by the *Banking Act 1965* and the *Statute Law Revision (Decimal Currency) Act 1966* in order to make certain changes required by the change to decimal currency and by the *Banking Act 1967* relating to the Papua and New Guinea Development Bank and the Australian Resources Development Bank Limited. It applies to all banks, including savings banks, operating in Australia including the external Territories of the Commonwealth except State banks trading in their own State. The objects of the Act are: (i) to provide a legal framework uniform throughout Australia for regulating the banking system; (ii) to safeguard depositors of the banks from loss; (iii) to provide for the co-ordination of banking policy under the direction of the Reserve Bank; (iv) to control the volume of credit in circulation and bank interest rates; (v) to mobilise and to provide machinery for the control of the foreign exchange and gold resources of the Australian economy. A summary of the main provisions of the *Banking Act 1959* is given in Year Book No. 46, pages 759-60.

(b) The *Reserve Bank Act 1959-1966* provides for the constitution and management of the Reserve Bank of Australia and the management of the Australian note issue.

(c) The *Commonwealth Banks Act 1959-1968* provides for the constitution and management of the Commonwealth Banking Corporation, Commonwealth Trading Bank of Australia, Commonwealth Savings Bank of Australia, and Commonwealth Development Bank of Australia.

The Commonwealth Banking Corporation came into being on 14 January 1960. It is the controlling body for the Commonwealth Trading Bank, Commonwealth Savings Bank and Commonwealth Development Bank. Under the *Banking Act 1959-1967* the Corporation and its constituent banks are subject to the same central banking controls as are the private trading banks.

The Board of the Corporation consists of the Managing Director of the Corporation, the Deputy Managing Director, the Secretary to the Treasury, and eight other members appointed by the Governor-General of whom one is Chairman and another Deputy Chairman. In addition, there is an Executive Committee of the Board for each of the three separate banks. These Executive Committees are appointed by the Treasurer, after consultation with the Board, and are charged with taking such action as is necessary to ensure that effect is given by the respective banks to the policies laid down for them and to any directions given by the Board in relation to their affairs. Under the Board the Corporation is managed by the Managing Director and the Deputy Managing Director. Each of the three constituent banks of the Corporation has its own statutory functions and responsibilities and its separate identity within the framework of the Corporation. Each bank is managed by a General Manager under the Managing Director of the Corporation.



### *State banking legislation*

The State Acts under which the various banks are incorporated differ. While some of the older banks were incorporated by special Act or Charter, e.g. the Bank of New South Wales by Act of Council 1817, the Bank of Adelaide by Act of the South Australian Parliament, and the Bank of New Zealand by Act of the General Assembly of New Zealand, most of the banks are incorporated under a companies Act of the States or the United Kingdom. This is also the case with those banks which were reconstructed after the financial crisis of 1893. State banks, constituted under State Acts, transacting general banking business are The Rural Bank of New South Wales, the State Bank of South Australia, and the Rural and Industries Bank of Western Australia. State savings banks, constituted under State Acts, transacting savings bank business are The State Savings Bank of Victoria, The Savings Bank of South Australia and the Savings Bank Division of the Rural and Industries Bank of Western Australia.

### **Presentation of banking statistics**

Because of the different purposes they serve in the Australian financial system, Australian banks have been divided for statistical purposes into the following groups and a separate series is presented for each.

- (i) *The Reserve Bank of Australia.* Statistics of the Central Banking Business, the Note Issue Department, and the Rural Credits Department are shown separately.

- (ii) *Trading banks.*

*Major trading banks.* These comprise the Commonwealth Trading Bank of Australia, Australia and New Zealand Banking Group Limited, Australia and New Zealand Bank Ltd, The English, Scottish and Australian Bank Ltd, The Bank of Adelaide, Bank of New South Wales, The Commercial Bank of Australia Ltd, The Commercial Banking Company of Sydney Ltd, The National Bank of Australasia Ltd. As from 1 October 1970, the Australia and New Zealand Banking Group Ltd, took over the banking business of the Australia and New Zealand Bank and the English, Scottish and Australian Bank.

*All trading banks.* These comprise the major trading banks and the following banks—the Bank of China, Bank of New Zealand, Bank of Queensland Ltd, Banque Nationale de Paris, the General Bank Department of the Rural Bank of New South Wales, the State Bank of South Australia, and the Rural Department of the Rural and Industries Bank of Western Australia.

- (iii) *Savings banks. These comprise:*

*Commonwealth Savings Bank.* The Commonwealth Savings Bank of Australia was established as a separate institution on 9 June 1928, having functioned previously as a department of the Commonwealth Bank.

*State savings banks.* State savings banks at present operating (with date of establishment shown in parentheses) are: The State Savings Bank of Victoria (1841); The Savings Bank of South Australia (1848); the Savings Bank Division of the Rural and Industries Bank of Western Australia (1956).

*Trustee savings banks.* Two trustee savings banks, The Hobart Savings Bank and Launceston Bank for Savings, operate within Tasmania. These Banks commenced business in 1845 and 1835 respectively.

*Private savings banks.* The Bank of New South Wales Savings Bank Ltd, the Australia and New Zealand Savings Bank Ltd, and the C.B.C. Savings Bank Ltd commenced business in 1956, the E.S. & A. Savings Bank Ltd in 1961, The Bank of Adelaide Savings Bank Ltd, The National Bank Savings Bank Ltd, and The Commercial Savings Bank of Australia Ltd in 1962. As from 1 October 1970, the Australia and New Zealand Savings Bank Ltd, took over the banking business of the E.S. & A. Savings Bank Ltd.

- (iv) *Development banks.* These comprise the Commonwealth Development Bank of Australia and the Australian Resources Development Bank Ltd.

## **Reserve Bank of Australia**

The Reserve Bank of Australia, established under the *Reserve Bank Act 1959*, which came into operation on 14 January 1960, continued in existence the body corporate known as the Commonwealth Bank of Australia. An account of the progress and development of that bank is given in earlier issues of the Year Book (see No. 37, pages 570–2, and No. 45, pages 735–7).



The general functions of the Reserve Bank are set out in Section 10 of the *Reserve Bank Act* 1959-1966, which states:

'It is the duty of the Board, within the limits of its powers, to ensure that the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia and that the powers of the Bank under this Act, the *Banking Act* 1959, and regulations under that Act are exercised in such a manner as, in the opinion of the Board, will best contribute to,

(a) the stability of the currency of Australia; (b) the maintenance of full employment in Australia; and (c) the economic prosperity and welfare of the people of Australia.'

In addition to its functions as a Central Bank, the Bank controls the Australian Note Issue through a Note Issue Department, provides special banking facilities through the Rural Credits Department, and acts as banker to the Commonwealth and some of the States.

### Management

Under the provisions of the *Reserve Bank Act* 1959-1966 the policy of the Reserve Bank is determined by a Board consisting of the Governor (Chairman), the Deputy Governor, the Secretary to the Treasury, and seven other members appointed by the Governor-General. The Bank is managed by the Governor, who acts in accordance with the policy of the Board and with any directions of the Board. The Bank is required to inform the Government of the monetary and banking policy of the Board. In the event of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank.

### Central banking business

Under the powers it possessed under the *Commonwealth Bank Act* 1911-1943 and under its war-time powers under the National Security Regulations the Commonwealth Bank gradually assumed the functions of a Central Bank. Part III of the *Commonwealth Bank Act* 1945 formally constituted the Bank as a Central Bank and granted the necessary powers to carry on the business of a Central Bank, and these powers were carried through into the present Act constituting the Reserve Bank. Under the provisions of the *Reserve Bank Act* 1959-1966 the capital for the Central Banking Business is the capital of the Commonwealth Bank for Central Banking purposes immediately prior to 14 January 1960, and such other sums as are transferred from the Reserve Bank Reserve Fund. The profits of the Bank are distributed as follows: (a) such sums as the Treasurer, after consultation with the Bank, determines shall be placed to the credit of the Reserve Bank Reserve Fund and (b) the remainder shall be paid to the Commonwealth.

### Note Issue Department

The Note Issue Department, established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank, was maintained in the same form under the *Reserve Bank Act* 1959. The Reserve Bank may, through this Department, issue, re-issue and cancel Australian notes. Under the *Reserve Bank Act* 1959-1966 the profits of the Note Issue Department are paid to the Commonwealth.

### Rural Credits Department

The Rural Credits Department, established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce, was continued in the same form under the *Reserve Bank Act* 1959. The Reserve Bank may, through this Department, make advances upon the security of primary produce placed under the legal control of the Bank, or other security associated with the production or marketing of primary produce, to co-operative associations or marketing boards formed under the laws of the Commonwealth or a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance shall not exceed one year. Under the provisions of the *Reserve Bank Act* 1959-1966 the capital of the Rural Credits Department is the capital of the Rural Credits Department of the Commonwealth Bank immediately prior to 14 January 1960, and \$4,000,000 provided by the Reserve Bank. The profits of the Rural Credits Department are dealt with as follows: (a) one-half to the credit of the Rural Credits Department Reserve Fund and (b) one-half to the credit of the Rural Credits Development Fund.

## RESERVE BANK OF AUSTRALIA: LIABILITIES, 30 JUNE 1966 TO 1970

(\$ million)

30 June—	Capital and reserve funds (a)	Development fund	Special reserve—premium on gold sold	Australian notes on issue	Deposits of trading banks		Deposits of savings banks	Other deposits, bills payable and other liabilities	Total
					Statutory reserve deposit accounts	Other			
CENTRAL BANKING BUSINESS									
1966	65.3	..	..	..	471.9	130.2	418.6	351.6	1,437.6
1967	68.8	..	..	..	473.8	98.9	492.5	355.3	1,489.3
1968	60.1	..	..	..	456.4	117.9	495.8	327.6	1,457.8
1969	63.0	..	..	..	565.6	60.4	535.2	658.0	1,882.1
1970	141.7	..	..	..	674.5	39.5	613.2	672.2	2,141.2
NOTE ISSUE DEPARTMENT									
1966	..	..	9.5	835.3	..	..	..	21.5	866.2
1967	..	..	9.5	930.1	..	..	..	22.1	961.7
1968	..	..	..	998.5	..	..	..	20.3	1,018.8
1969	..	..	..	1,091.5	..	..	..	45.9	1,137.4
1970	..	..	..	1,195.8	..	..	..	62.5	1,258.3
RURAL CREDITS DEPARTMENT									
1966	15.3	0.7	..	..	..	..	..	158.7	174.7
1967	16.0	0.7	..	..	..	..	..	344.2	361.0
1968	16.7	0.8	..	..	..	..	..	212.0	229.6
1969	17.6	0.9	..	..	..	..	..	461.8	480.3
1970	18.5	1.1	..	..	..	..	..	338.5	358.1
TOTAL(b)									
1966	80.7	0.7	9.5	835.3	471.9	130.2	418.6	389.0	2,335.8
1967	84.8	0.7	9.5	930.1	473.8	98.9	492.5	393.6	2,483.9
1968	76.9	0.8	..	998.5	456.4	117.9	495.8	315.9	2,462.2
1969	80.6	0.9	..	1,091.5	565.6	60.4	535.2	420.8	2,754.9
1970	160.1	1.1	..	1,195.8	674.5	39.5	613.2	478.7	3,162.9

(a) Includes special reserve—International Monetary Fund special drawing rights. have been offset.

(b) Inter-departmental accounts

## RESERVE BANK OF AUSTRALIA: ASSETS, 30 JUNE 1966 TO 1970

(\$ million)

30 June—	Gold and balances held abroad (a)	Other overseas securities	Australian notes, coin	Australian Government securities (b)	Cheques and bills of other banks	Loans, advances, bills dis- counted, all other assets(c)	Bank premises (d)	Bills receivable and remit- tances in transit	Total <sup>f</sup>
CENTRAL BANKING BUSINESS									
1966 .	551.5	171.3	24.0	392.2	15.7	220.4	29.1	33.5	1,437.6
1967 .	396.9	168.8	12.4	420.6	9.2	396.1	30.9	54.3	1,489.3
1968 .	349.3	182.0	9.5	536.2	8.0	263.7	33.8	75.3	1,457.8
1969 .	589.1	231.6	8.4	386.0	10.8	570.1	35.0	51.1	1,882.1
1970 .	758.8	201.5	12.6	573.9	8.0	469.0	36.3	81.1	2,141.2
NOTE ISSUE DEPARTMENT									
1966 .	435.0	134.8	..	296.2	..	0.2	..	..	866.2
1967 .	394.5	174.8	..	391.7	..	0.5	0.2	..	961.7
1968 .	315.5	151.4	..	501.0	..	(e)50.8	0.2	..	1,018.8
1969 .	164.5	198.5	..	457.3	..	(e)316.8	0.3	..	1,137.4
1970 .	189.9	168.0	..	606.1	..	(e)294.0	0.4	..	1,258.3
RURAL CREDITS DEPARTMENT									
1966 .	..	..	..	..	..	174.7	..	..	174.7
1967 .	..	..	..	..	..	361.0	..	..	361.0
1968 .	..	..	..	..	..	229.6	..	..	229.6
1969 .	..	..	..	..	..	480.3	..	..	480.3
1970 .	..	..	..	..	..	358.1	..	..	358.1
TOTAL(f)									
1966 .	986.5	306.1	24.0	688.5	15.7	252.4	29.1	33.5	2,335.8
1967 .	791.4	343.6	12.4	812.4	9.2	429.5	31.0	54.3	2,483.9
1968 .	664.8	333.5	9.5	1,037.2	8.0	300.1	34.0	75.3	2,462.2
1969 .	753.5	430.1	8.4	843.3	10.8	622.4	35.3	51.1	2,754.9
1970 .	948.7	369.5	12.6	1,180.0	8.0	526.4	36.7	81.1	3,162.9

(a) Includes currency at short call and International Monetary Fund drawing rights. and Treasury notes.

(c) After deducting provision for debts considered bad or doubtful.

(d) Includes Treasury bills

(e) At cost, less amounts

(f) Inter-departmental accounts have been offset.

(g) Includes interest-bearing deposit account established with the Central Bank.

**RESERVE BANK OF AUSTRALIA: NET PROFITS, 1965-66 TO 1969-70**  
(\$ million)

	<i>Central Banking Business</i>	<i>Note Issue Depart- ment</i>	<i>Rural Credits Depart- ment</i>	<i>Total</i>	<i>Distributed to—</i>				
					<i>Common- wealth of Australia</i>	<i>Reserve Bank Reserve fund</i>	<i>Rural Credits Department</i>		
							<i>Reserve fund</i>	<i>Develop- ment fund</i>	
1965-66	.	.	8.7	31.1	1.2	41.0	35.8	4.0	0.6
1966-67	.	.	7.9	34.3	1.3	43.6	38.8	3.5	0.7
1967-68	.	.	4.4	23.0	1.5	29.0	26.2	1.3	0.7
1968-69	.	.	5.7	23.8	1.6	31.1	26.6	2.9	0.8
1969-70	.	.	8.9	36.3	1.9	47.1	41.6	3.6	0.9

### Trading banks

Not all trading banks use 30 June as the end of their accounting year. In the tables on pages 476-8 balance sheet and profit and loss account information for the years 1969 and 1970 is shown for each bank as at the date on which its accounting year ends. The dates used are: 30 June—Commonwealth Trading Bank of Australia, The Commercial Bank of Australia Ltd, The Commercial Banking Co. of Sydney Ltd, The Rural Bank of New South Wales and the State Bank of South Australia; 30 September—Australia and New Zealand Banking Group Ltd, Australia and New Zealand Bank Ltd, English, Scottish and Australian Bank Ltd, The Bank of Adelaide, Bank of New South Wales and The National Bank of Australasia Ltd; 30 August—The Bank of Queensland Ltd; 31 March—The Rural and Industries Bank of Western Australia. These tables relate to liabilities and assets both inside and outside Australia and exclude the overseas banks, namely the Bank of China, Bank of New Zealand and Banque Nationale de Paris.

In the tables on pages 479-80 figures shown for averages of liabilities and assets are the average of liabilities and assets within Australia (including Papua, New Guinea and other External Territories) of the banks, including the three overseas banks, on the weekly balance days (Wednesdays) during the period concerned. Averages of debits to customers' accounts and new lending commitments are averages for weeks ended on the Wednesdays during the period.

In the classification of bank advances, borrowers are classified into two main groups:

*Resident borrowers* comprising all institutions (including branches of overseas institutions) engaged in business in Australia and individuals permanently residing in Australia, and

*Non-resident borrowers* comprising all other persons and institutions, including companies incorporated abroad, which, although represented, do not carry on business in Australia.

Advances to resident borrowers are classified into:

*Business advances* which are advances to partnerships, companies and other institutions engaged in business in Australia, advances to individuals actively engaged in business or a profession on their own behalf if the advances are mainly for purposes of that business or profession, and advances to mutual, co-operative and benefit societies which distribute their profits to members by way of dividends, rebates of charges for goods and services, or increased benefits.

Separate figures are shown for business advances to companies and to other (unincorporated) businesses and advances are also classified to the main industry of borrower.

*Advances to public authorities* which are advances to local and semi-government authorities including separately constituted government business undertakings but not Commonwealth and State governments.

*Personal advances* which are advances to individuals for purposes other than carrying on a business or profession.

*Advances to non-profit organisations* which are advances to organisations which are not operated for the purpose of making a profit or gain to individual members, but for the purposes of the organisations or for the benefit of the community in general.

The classification used for overdraft limits is the same as that used for the classification of bank advances (see above) while abridged versions of this classification are used for bank deposits and new and increased lending commitments.



At 30 June 1970 the maximum rate of interest paid by trading banks on fixed deposits for the following terms were: (i) on deposits of less than \$50,000, 3 months but less than 12 months—4.80 per cent; 12 months but less than 18 months—5.00 per cent; 18 months to 24 months—5.30 per cent and (ii) on deposits of \$50,000 and more, 30 days but less than 24 months—5.50 per cent. The maximum rate of interest charged on overdrafts was 8.25 per cent and the maximum flat rate on unsecured personal loans was 6.50 per cent.

TRADING BANKS: NUMBER OF BRANCHES(a) AND AGENCIES  
STATES AND TERRITORIES, 30 JUNE 1970

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Branches—</b>									
Major trading banks	1,611	1,253	718	408	374	107	14	39	4,524
Other trading banks	175	2	4	35	58	..	..	..	274
<b>All trading banks—</b>									
Metropolitan area	837	727	243	217	214	28	4	39	2,309
Elsewhere	949	528	479	226	218	79	10	..	2,489
<b>Total branches</b>	<b>1,786</b>	<b>1,255</b>	<b>722</b>	<b>443</b>	<b>432</b>	<b>107</b>	<b>14</b>	<b>39</b>	<b>4,798</b>
<b>Total agencies</b>	<b>360</b>	<b>393</b>	<b>262</b>	<b>306</b>	<b>166</b>	<b>60</b>	<b>12</b>	<b>21</b>	<b>1,580</b>

(a) Includes head offices.

TRADING BANKS: LIABILITIES(a), 1969 AND 1970  
(\$'000)

Bank	Paid-up capital	Reserve funds (used in business of bank)	Final dividend proposed	Balance of profit and loss account	Total share-holders' funds or total capital and reserve funds	Balances due to other banks	Deposits, bills payable and other liabilities (b)	Total
<b>1970—</b>								
<b>Major trading banks—</b>								
Commonwealth Trading Bank of Australia	(c)14,858	19,278	..	..	34,136	9,855	1,692,723	1,736,713
Australia and New Zealand Banking Group Ltd.	69,124	..	3,456	-20	72,560	3,166	980	76,706
Australia and New Zealand Bank Ltd.	33,132	34,283	..	5,869	73,283	240,010	1,550,589	1,863,882
The English, Scottish and Australian Bank Ltd.	18,072	11,295	..	1,759	31,125	64,329	595,538	690,993
The Bank of Adelaide	16,803	9,882	840	1,574	29,099	6,003	115,688	150,789
Bank of New South Wales	80,010	49,534	4,000	12,559	146,103	36,984	2,125,944	2,309,031
The Commercial Bank of Australia Ltd.	24,422	21,300	1,296	1,838	48,856	38,215	759,322	846,392
The Commercial Banking Co. of Sydney Ltd.	19,125	20,281	1,217	2,196	42,819	26,275	678,067	747,161
The National Bank of Australasia Ltd.	25,223	26,500	1,639	1,300	54,662	35,628	1,098,644	1,188,934
<b>Total, major trading banks</b>	<b>300,767</b>	<b>192,351</b>	<b>12,449</b>	<b>27,076</b>	<b>532,644</b>	<b>460,463</b>	<b>8,617,494</b>	<b>9,610,601</b>
<b>Other trading banks—</b>								
Bank of Queensland Ltd.	2,750	1,498	121	184	4,552	..	12,563	17,115
The Rural Bank of New South Wales (General Bank Department)	(d)18,129	(e)46,270	..	..	64,399	..	361,838	426,237
State Bank of South Australia	(f)14,711	8,593	..	..	23,304	..	(g)137,142	160,447
The Rural and Industries Bank of Western Australia (Rural Department)	(h)22,230	4,997	..	..	27,226	..	(i)166,247	193,473
<b>Total, other trading banks</b>	<b>57,820</b>	<b>61,358</b>	<b>121</b>	<b>184</b>	<b>119,482</b>	<b>..</b>	<b>677,790</b>	<b>797,272</b>
<b>Total, trading banks, 1970</b>	<b>358,587</b>	<b>253,709</b>	<b>12,570</b>	<b>27,260</b>	<b>652,125</b>	<b>460,463</b>	<b>9,295,284</b>	<b>10,407,873</b>
<b>Total, trading banks, 1969</b>	<b>269,859</b>	<b>245,658</b>	<b>8,677</b>	<b>21,952</b>	<b>546,147</b>	<b>335,877</b>	<b>8,671,567</b>	<b>9,553,591</b>

(a) For dates of balance sheets see page 475. (b) Includes provision for contingencies. (c) Amount specified as capital in the *Commonwealth Banks Act 1959*. (d) Inscribed stock and debentures issued for capital purposes. (e) Includes special reserve built up from share of profits of the Commonwealth Savings Bank in New South Wales. (f) Capital provided by State Government of South Australia. (g) Includes \$92,928,906 of advances by State Treasurer to Home Builders' Fund. (h) Capital provided by State Government of Western Australia. The Sinking Fund established for redemption of capital has been deducted. (i) Includes Savings Bank deposits, \$68,815,989.

TRADING BANKS: ASSETS(a), 1969 AND 1970  
(\$'000)

Bank	Coin, bullion, notes and cash at Reserve Bank	Money at short call over- seas	Australian public securities						Loans to author- ised dealers in short- term money market	
			Commonwealth Government			Local and semi- govt. author- ities	Other public secur- ities	Other secur- ities		
			Treas- ury bills and notes	Other secur- ities						
1970—										
Major trading banks—										
Commonwealth Trading Bank of Australia	42,900	11,357	5,723	261,607	16,360	711	8,288	27,090		
Australia and New Zealand Bank- ing Group Ltd	43	..	..	..	..	..	73,329	..		
Australia and New Zealand Bank Ltd	54,502	4,389	6,375	140,922	..	21,866	11,322	970		
The English, Scottish and Aus- tralian Bank Ltd	20,432	151	6,025	76,138	..	1,060	10,443	15,005		
The Bank of Adelaide	4,682	1,394	250	15,056	..	..	21,600	5,550		
Bank of New South Wales	44,648	24,322	52,212	284,608	..	13,242	42,017	32,750		
The Commercial Bank of Australia Ltd	25,727	4,072	100	89,168	570	2,421	19,979	2,500		
The Commercial Banking Co. of Sydney Ltd	18,051	2,250	..	93,893	..	..	14,532	8,900		
The National Bank of Australasia Ltd	22,788	1,650	20,050	146,424	..	..	14,223	28,350		
Total, major trading banks	233,772	49,585	90,735	1,107,817	16,930	39,300	215,732	121,115		
Other trading banks—										
Bank of Queensland Ltd	206	..	..	1,230	53	..	1,137	203		
The Rural Bank of New South Wales (General Bank Depart- ment)	7,135	..	..	75,249	6,527	..	12,549	10,925		
State Bank of South Australia	1,554	..	..	12,700	..	20	..	..		
The Rural and Industries Bank of Western Australia (Rural Depart- ment)(d)	(e)9,902	..	1,934	47,273	23,766	..	..	..		
Total, other trading banks	18,797	..	1,934	136,453	30,345	20	13,686	11,127		
Total, trading banks, 1970	252,569	49,585	92,669	1,244,269	47,275	39,319	229,418	132,242		
Total, trading banks, 1969	250,305	57,383	77,756	1,344,820	38,904	51,944	149,483	158,166		

Bank	Statutory reserve deposit account with Reserve Bank	Cheques and bills of, and balances with and due from other banks	Loans(b), advances and bills discounted	Bank premises, furniture and sites	Bills receivable and re- mitances in transit	All other assets	Total
1970—							
Major trading banks—							
Commonwealth Trading Bank of Australia	140,103	25,763	862,394	14,584	300,307	19,525	1,736,713
Australia and New Zealand Banking Group Ltd	..	11	1,181	64	5	2,072	76,706
Australia and New Zealand Bank Ltd	85,022	157,641	1,122,909	38,282	209,666	10,017	1,863,882
The English, Scottish and Australian Bank Ltd	46,141	22,815	381,246	16,372	89,635	5,530	690,993
The Bank of Adelaide	9,051	12,854	64,310	6,016	3,295	6,731	150,789
Bank of New South Wales	148,880	62,559	1,257,972	36,451	279,363	30,008	2,309,031
The Commercial Bank of Australia Ltd	57,447	47,991	469,777	20,135	48,997	57,510	846,392
The Commercial Banking Co. of Sydney Ltd	59,972	20,648	401,641	16,757	102,469	8,048	747,161
The National Bank of Australasia Ltd	85,125	27,975	639,784	24,367	124,293	53,906	1,188,934
Total, major trading banks	631,741	378,256	5,201,213	173,028	1,158,030	193,348	9,610,601
Other trading banks—							
Bank of Queensland Ltd	212	1,909	11,850	298	..	16	17,115
The Rural Bank of New South Wales (General Bank Department)	..	19,535	271,453	16,213	14,211	4,989	426,237
State Bank of South Australia	..	657	(c)125,728	1,453	4,450	1,336	160,447
The Rural and Industries Bank of Western Australia (Rural Department)(d)	..	(f)	97,370	8,172	5,057	..	193,473
Total, other trading banks	212	22,101	506,402	26,137	23,718	6,340	797,272
Total, trading banks, 1970	631,953	400,357	5,707,614	199,164	1,181,748	199,688	10,407,873
Total, trading banks, 1969	582,714	420,708	5,004,339	185,256	1,137,420	94,391	9,553,591

(a) For dates of balance sheets see page 475. (b) Other than loans to authorised dealers in the short-term money market. (c) Includes \$92,845,701 advances under extended terms—Home Builders' Fund. (d) Includes assets held against Savings Bank deposits of \$68,815,989. (e) Includes accounts with State Treasury. (f) Included with Coin, bullion, notes and cash at Reserve Bank.

**TRADING BANKS: PROFIT AND LOSS, APPROPRIATION OF PROFITS(a)**  
**1969 AND 1970**  
 (\$'000)

Bank	Profit and loss			Profits appropriated to—					
	Net earnings (b)	Ex- penses (c)	Income land and other taxes and pay- ments in lieu of taxes	Net profit	Reserve funds (d)	Writing- off bank premises	Other appro- priations	Dividends(e)	
								Paid and pro- posed	Rate per annum (per cent)
1970—									
Major trading banks—									
Commonwealth Trading Bank of Australia .	66,758	56,612	4,962	5,183	2,312	559	(f)2,312	..	..
Australia and New Zealand Banking Group Ltd .	7,042	174	..	6,868	..	..	..	6,912	10
Australia and New Zealand Bank Ltd .	86,382	69,618	8,638	8,125	4,303	..	..	3,976	12
The English, Scottish and Australian Bank Ltd .	39,428	31,426	4,937	3,066	..	..	..	2,937	16.25
The Bank of Adelaide .	8,997	6,384	450	2,163	..	..	..	1,642	10
Bank of New South Wales .	107,744	77,390	15,064	15,290	3,000	..	..	8,001	10
The Commercial Bank of Australia Ltd .	36,529	31,320	2,575	2,634	..	200	..	2,186	(g)
The Commercial Banking Co. of Sydney Ltd .	33,381	27,900	1,885	3,596	1,000	200	..	2,269	11
The National Bank of Australasia Ltd .	53,418	43,297	4,956	5,165	2,000	..	..	3,027	12
Total, major trading banks .	439,680	344,121	43,467	52,092	12,615	959	2,312	30,949	..
Other trading banks—									
Bank of Queensland Ltd	1,029	408	289	332	85	..	..	221	8.5
The Rural Bank of New South Wales (General Bank Department) .	15,836	14,258	n.a.	1,577	789	..	(h)789	..	..
State Bank of South Australia .	(i)8,951	7,715	n.a.	1,236	1,236	..	..	..	..
The Rural and Industries Bank of Western Aus- tralia (Rural Depart- ment)(j) .	(i)13,378	12,350	n.a.	1,028	1,028	..	..	..	..
Total, other trading banks .	39,193	34,731	289	4,174	3,138	..	789	221	..
Total, trading banks, 1970 .	478,874	378,852	43,756	56,266	15,753	959	3,101	31,170	..
Total, trading banks, 1969 .	422,206	335,502	41,495	45,209	13,387	1,394	2,496	21,617	..

(a) For balance dates see page 475. (b) Discount and interest earned, net exchange, commissions and other items (including transfers from contingencies accounts) after deducting interest paid and accrued on deposits, rebate on bills current at balance date, amounts written off assets and losses on realisation of assets, and transfers to the credit of contingencies accounts (out of which accounts provision for all bad and doubtful debts has been made). (c) Includes directors' fees. (d) Excludes accumulated profits and profit and loss accounts. (e) Dividends paid or payable out of profits earned during the year. (f) Commonwealth of Australia. (g) Four per cent on Preference Stock Units and eleven per cent on Ordinary Stock Units. (h) Treasurer of New South Wales. (i) Earnings represent gross earnings; expenses include interest paid, management expenses and provisions for contingencies. (j) Includes profit and loss on account of Savings Bank business.



**ALL TRADING BANKS: AVERAGE LIABILITIES(a) WITHIN AUSTRALIA(b)**  
**JUNE 1966 TO 1970**  
 (\$ million)

June—	Deposits repayable in Australia				Balances due to other banks	Bills payable and all other liabilities to the public	Total
	Fixed	Current					
		Bearing interest	Not bearing interest				
<b>Major trading banks—</b>							
1966	2,002.6	316.7	2,673.2	4,992.4	25.8	139.2	5,157.4
1967	2,129.1	321.2	2,814.5	5,264.8	30.3	129.5	5,424.5
1968	2,301.8	378.3	3,017.8	5,697.9	41.5	147.1	5,886.6
1969	2,653.2	395.0	3,228.9	6,277.1	99.2	174.9	6,551.2
<b>All trading banks—</b>							
1966	2,136.0	370.9	2,801.5	5,308.4	35.0	253.9	5,597.3
1967	2,274.8	378.9	2,960.0	5,613.7	39.6	256.1	5,909.4
1968	2,472.9	448.6	3,165.5	6,086.9	54.2	284.5	6,425.6
1969	2,850.5	467.9	3,387.2	6,705.6	111.5	322.2	7,139.3
<b>1970—</b>							
<b>Major trading banks—</b>							
Commonwealth Trading Bank of Australia	684.4	66.2	627.6	1,378.2	19.9	21.1	1,419.2
Australia and New Zealand Bank Ltd	388.4	35.7	514.6	938.8	87.4	53.7	1,079.8
The Bank of Adelaide	44.7	5.4	50.9	101.0	3.9	1.6	106.6
Bank of New South Wales	667.9	110.7	842.1	1,620.7	27.8	32.0	1,680.5
The Commercial Bank of Australia Ltd	229.8	29.0	303.7	562.5	10.1	14.5	587.1
The Commercial Banking Co. of Sydney Ltd	253.1	39.4	295.3	587.8	14.6	33.7	636.2
The English, Scottish and Australian Bank Ltd	184.5	32.9	291.1	508.4	58.1	45.8	612.3
The National Bank of Australasia Ltd	401.6	71.8	452.4	925.8	22.2	79.4	1,027.4
Total, major trading banks	2,854.6	391.2	3,377.5	6,623.2	244.0	281.8	7,149.1
<b>Other trading banks—</b>							
Bank of China	..	0.1	1.2	1.3	..	..	1.3
Bank of New Zealand	3.3	0.3	7.5	11.1	0.4	0.4	12.0
Bank of Queensland Ltd	2.7	7.7	..	10.4	0.5	0.6	11.6
Banque Nationale de Paris	11.4	0.5	8.4	20.3	5.4	0.6	26.2
The Rural Bank of New South Wales (General Bank Department)	161.5	54.5	104.5	320.5	6.7	21.1	348.3
State Bank of South Australia	28.0	2.8	10.0	40.8	0.1	107.6	148.5
The Rural and Industries Bank of Western Australia (Rural Department)	35.6	5.9	29.8	71.2	0.5	27.3	99.0
Total, other trading banks	242.6	71.7	161.4	475.7	13.6	157.6	647.0
Total, all trading banks, 1970	3,097.2	462.9	3,538.9	7,098.9	257.7	439.4	7,796.0

(a) Excludes shareholders' funds, inter-branch accounts and contingencies.  
 other External Territories.

(b) Includes Papua, New Guinea and

**ALL TRADING BANKS: AVERAGE ASSETS(a) WITHIN AUSTRALIA(b)**  
**JUNE 1966 TO 1970**  
(\$ million)

June—	Coin, bullion, notes and cash at Reserve Bank	Commonwealth Government securities		Loans to authorised dealers in short-term money market	Statutory Reserve Deposit Account with Reserve Bank	Loans(c) advances and bills discounted	All other assets (d)	Total
		Treasury bills and notes	Other securities					
Major Trading Banks—								
1966	150.2	38.5	1,019.0	61.0	472.6	2,844.6	504.2	5,090.1
1967	160.0	24.1	1,065.8	73.5	474.0	3,180.9	493.2	5,471.5
1968	150.4	25.1	1,071.8	74.0	456.5	3,597.7	549.0	5,924.4
1969	149.4	47.5	1,240.6	77.9	565.9	3,952.2	575.0	6,608.5
All trading banks—								
1966	162.8	40.0	1,116.6	74.8	473.5	3,182.8	548.4	5,598.9
1967	172.3	24.6	1,187.0	88.8	475.2	3,547.8	535.1	6,030.8
1968	161.4	27.5	1,188.5	87.7	457.8	4,019.8	600.9	6,543.6
1969	158.5	52.9	1,389.6	94.9	567.6	4,383.6	635.3	7,282.4
1970—								
Major Trading Banks—								
Commonwealth Trading								
Bank of Australia	34.1	6.2	291.7	10.7	140.6	832.8	86.0	1,402.2
Australia and New Zealand Bank Ltd	25.8	13.1	132.4	0.8	95.1	643.6	105.1	1,015.8
The Bank of Adelaide	4.1	..	15.7	0.3	10.6	64.3	39.3	134.3
Bank of New South Wales	35.9	16.4	287.3	37.8	165.4	1,104.5	133.1	1,780.4
The Commercial Bank of Australia Ltd	10.9	1.5	90.9	1.5	57.8	391.8	59.3	613.7
The Commercial Banking Co. of Sydney Ltd	14.4	1.7	95.6	7.2	60.4	390.5	61.8	631.5
The English, Scottish and Australian Bank Ltd	15.6	4.1	78.3	3.4	52.2	362.1	82.8	598.6
The National Bank of Australasia Ltd	21.5	8.6	150.1	12.6	94.7	611.4	139.3	1,038.2
Total, major trading banks	162.2	51.5	1,142.1	74.4	676.7	4,400.9	706.8	7,214.6
Other trading banks—								
Bank of China	0.2	..	..	..	0.1	0.1	1.2	1.6
Bank of New Zealand	0.1	1.7	0.4	0.4	0.8	8.9	4.1	16.4
Bank of Queensland Ltd	0.1	..	1.3	0.7	0.2	11.5	2.6	16.4
Banque Nationale de Paris	0.2	1.0	0.1	4.1	0.9	20.0	5.9	32.2
The Rural Bank of New South Wales (General Bank Department)	5.6	..	89.2	16.7	..	269.8	22.1	403.4
State Bank of South Australia	1.7	..	12.7	..	..	124.9	19.2	158.5
The Rural and Industries Bank of Western Australia (Rural Department)	1.9	0.1	29.4	6.4	..	66.4	13.1	117.4
Total, other trading banks	9.7	2.8	133.1	28.4	1.9	501.7	68.2	745.8
Total, all trading banks, 1970	171.9	54.3	1,275.2	102.8	678.7	4,902.6	775.0	7,960.5

(a) Excludes inter-branch accounts and contingencies. (b) Includes Papua, New Guinea and other External Territories. (c) Excludes loans to authorised dealers in the short-term money market. (d) Includes local government and semi-government securities.

**Classification of bank advances, deposits, new and increased lending commitments and overdraft limits**

For an explanation of items in the following table see notes on page 475.

**MAJOR TRADING BANKS: CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(a),  
STATES, 13 JANUARY 1971**

(\$ million)

	N.S.W. (b)	Vic.	Qld (a)	S.A. (c)	W.A.	Tas.	Aust. (a)	Term loan com- ponent
<i>Resident Borrowers—</i>								
<i>Business advances—</i>								
Agriculture, grazing and dairying . . . . .	390.3	197.5	209.9	79.6	80.9	20.4	978.7	130.5
Manufacturing . . . . .	298.8	241.2	71.9	36.7	25.3	19.2	693.1	144.7
Transport, storage and communication . . . . .	40.3	23.2	11.3	4.6	6.4	1.5	87.3	16.9
<i>Finance—</i>								
Building and housing societies . . . . .	19.3	16.1	2.2	1.1	0.8	0.3	39.8	0.1
Other . . . . .	69.6	85.1	18.5	22.4	6.9	3.2	205.9	3.7
Total, finance . . . . .	88.9	101.3	20.8	23.5	7.7	3.5	245.7	3.8
<i>Commerce—</i>								
Retail trade . . . . .	108.5	72.3	50.3	24.6	21.7	8.0	285.4	10.5
Wholesale trade(d) . . . . .	171.9	112.4	18.4	20.0	28.6	6.5	357.8	15.3
Total, commerce . . . . .	280.5	184.8	68.7	44.6	50.2	14.5	643.2	25.9
Building and construction Other business . . . . .	60.9 324.5	35.5 210.0	18.4 125.4	7.8 28.6	9.7 34.1	2.4 8.7	134.8 731.3	9.4 218.9
Unclassified . . . . .	22.0	10.4	5.3	3.3	6.4	0.8	48.2	2.0
Total, business ad- vances . . . . .	1,506.3	1,003.8	531.6	228.9	220.8	71.0	3,562.3	552.0
of which—								
Companies . . . . .	983.1	689.6	243.1	124.2	97.8	41.7	2,179.5	422.4
Other . . . . .	523.2	314.2	288.5	104.7	123.1	29.2	1,382.8	129.6
Advances to public authori- ties(e) . . . . .	15.3	41.7	4.4	1.0	1.3	0.4	64.1	2.0
<i>Personal advances—</i>								
Building or purchasing own home (individuals) Other (including personal loans) . . . . .	149.6 219.6	63.8 127.8	39.2 66.6	16.1 30.5	19.2 32.4	4.4 8.0	292.2 484.9	0.1 0.2
Total, personal . . . . .	369.2	191.5	105.8	46.6	51.6	12.4	777.2	0.3
Advances to non-profit or- ganisations . . . . .	29.9	18.6	12.3	3.3	4.3	1.0	69.5	2.6
Total, advances to resi- dent borrowers . . . . .	1,920.7	1,255.6	654.1	279.8	278.1	84.8	4,473.0	556.9
Advances to non-resident borrowers . . . . .	1.8	1.2	0.2	0.1	0.2	..	3.6	..
Total, all advances . . . . .	1,922.6	1,256.8	654.3	279.9	278.3	84.8	4,476.6	556.9

(a) Includes Papua and New Guinea. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.  
(d) Includes temporary advances to woolbuyers. (e) Includes local government and semi-government bodies.



**MAJOR TRADING BANKS: CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(a)  
JULY 1969 TO JANUARY 1971**

	<i>At second Wednesday of—</i>							
	<i>July 1969</i>		<i>January 1970</i>		<i>July 1970</i>		<i>January 1971</i>	
	<i>Amount (\$ m)</i>	<i>Per cent</i>	<i>Amount (\$ m)</i>	<i>Per cent</i>	<i>Amount (\$ m)</i>	<i>Per cent</i>	<i>Amount (\$ m)</i>	<i>Per cent</i>
<i>Resident borrowers—</i>								
<i>Business advances—</i>								
Agriculture, grazing and dairying . . . .	938.5	23.2	945.8	22.5	997.8	22.6	978.7	21.9
Manufacturing . . . .	673.1	16.7	669.0	15.9	729.0	16.5	693.1	15.5
Transport, storage and communication . . . .	75.9	1.9	78.9	1.9	85.7	1.9	87.3	2.0
<i>Finance—</i>								
Building and housing societies . . . .	45.5	1.1	41.8	1.0	42.6	1.0	39.8	0.9
Other . . . .	130.4	3.3	166.7	4.0	161.8	3.7	205.9	4.6
<i>Total, finance . . . .</i>	<i>175.8</i>	<i>4.4</i>	<i>208.4</i>	<i>5.0</i>	<i>204.5</i>	<i>4.6</i>	<i>245.7</i>	<i>5.5</i>
<i>Commerce—</i>								
Retail trade . . . .	328.2	8.1	296.0	7.0	332.4	7.5	285.4	6.4
Wholesale trade(b) . . . .	357.4	8.8	351.0	8.3	358.2	8.1	357.8	8.0
<i>Total, commerce . . . .</i>	<i>685.6</i>	<i>17.0</i>	<i>647.0</i>	<i>15.4</i>	<i>690.7</i>	<i>15.6</i>	<i>643.2</i>	<i>14.4</i>
Building and construction . . . .	141.3	3.5	141.5	3.4	149.2	3.4	134.8	3.0
Other businesses . . . .	478.1	11.8	588.6	14.0	617.8	14.0	731.3	16.3
Unclassified . . . .	47.9	1.2	60.1	1.4	46.3	1.0	48.2	1.1
<i>Total, business advances of which—</i>	<i>3,216.4</i>	<i>79.6</i>	<i>3,339.4</i>	<i>79.4</i>	<i>3,521.1</i>	<i>79.8</i>	<i>3,562.3</i>	<i>79.6</i>
Companies . . . .	1,850.9	45.8	1,976.3	47.0	2,075.4	47.0	2,179.5	48.7
Other . . . .	1,365.5	33.8	1,363.1	32.4	1,445.7	32.8	1,382.8	30.9
Advances to public authorities(c) . . . .	34.0	0.8	63.1	1.5	36.9	0.8	64.1	1.4
Personal advances classified according to main purpose of advance—								
Building or purchasing own home (individuals) . . . .	293.7	7.3	291.9	6.9	297.3	6.7	292.2	6.5
Other (including personal loans) . . . .	422.6	10.5	437.6	10.4	483.8	11.0	484.9	10.8
<i>Total, personal . . . .</i>	<i>716.3</i>	<i>17.7</i>	<i>729.5</i>	<i>17.3</i>	<i>781.1</i>	<i>17.7</i>	<i>777.2</i>	<i>17.4</i>
Advances to non-profit organisations . . . .	68.5	1.7	70.5	1.7	70.7	1.6	69.5	1.6
<i>Total, advances to resident borrowers . . . .</i>	<i>4,035.2</i>	<i>99.9</i>	<i>4,202.5</i>	<i>99.9</i>	<i>4,409.8</i>	<i>99.9</i>	<i>4,473.0</i>	<i>99.9</i>
Advances to non-resident borrowers . . . .	3.0	0.1	3.8	0.1	4.0	0.1	3.6	0.1
<i>Total, all advances . . . .</i>	<i>4,038.3</i>	<i>100.0</i>	<i>4,206.3</i>	<i>100.0</i>	<i>4,413.8</i>	<i>100.0</i>	<i>4,476.6</i>	<i>100.0</i>

(a) Includes Papua and New Guinea, government and semi-government bodies.

(b) Includes temporary advances to woolbuyers.

(c) Includes local

**MAJOR TRADING BANKS: CLASSIFICATION OF DEPOSITS(a) WITHIN AUSTRALIA(b)**  
**JULY 1969 TO JANUARY 1971**

	<i>At second Wednesday of—</i>							
	<i>July 1969</i>		<i>January 1970</i>		<i>July 1970</i>		<i>January 1971</i>	
	<i>Amount (\$ m)</i>	<i>Per cent</i>	<i>Amount (\$ m)</i>	<i>Per cent</i>	<i>Amount (\$ m)</i>	<i>Per cent</i>	<i>Amount (\$ m)</i>	<i>Per cent</i>
<i>Resident depositors—</i>								
<i>Business deposits—</i>								
Agriculture, grazing and dairying . . . . .	814.4	13.9	852.8	13.8	756.2	12.3	795.9	12.2
Manufacturing . . . . .	350.7	6.0	423.4	6.8	359.0	5.8	395.6	6.1
Transport, storage and communication . . . . .	86.7	1.5	91.9	1.5	96.8	1.6	95.4	1.5
Finance . . . . .	440.9	7.5	411.5	6.6	421.0	6.9	442.2	6.8
Commerce . . . . .	423.8	7.3	493.4	7.9	442.1	7.2	530.1	8.2
Building and construction . . . . .	182.3	3.1	204.4	3.3	187.3	3.1	222.3	3.4
Other businesses . . . . .	751.8	12.8	835.3	13.5	844.2	13.7	912.9	14.0
Unclassified . . . . .	66.4	1.1	66.0	1.1	91.2	1.5	71.4	1.1
<i>Total, business deposits</i>	<i>3,117.0</i>	<i>53.2</i>	<i>3,378.5</i>	<i>54.5</i>	<i>3,197.8</i>	<i>52.1</i>	<i>3,465.8</i>	<i>53.3</i>
of which—								
Companies . . . . .	1,365.2	23.3	1,518.0	24.5	1,469.8	23.9	1,594.6	24.5
Other . . . . .	1,751.8	29.9	1,860.6	30.0	1,728.0	28.2	1,871.2	28.8
Deposits of public authorities . . . . .	341.2	5.8	286.2	4.6	377.5	6.1	358.9	5.5
Personal deposits . . . . .	2,019.0	34.5	2,148.2	34.6	2,161.9	35.2	2,285.3	35.1
Deposits of non-profit organisations . . . . .	280.3	4.8	289.2	4.7	307.6	5.0	292.4	4.5
<i>Total, resident depositors</i>	<i>5,757.5</i>	<i>98.3</i>	<i>6,102.1</i>	<i>98.4</i>	<i>6,044.8</i>	<i>98.4</i>	<i>6,402.4</i>	<i>98.4</i>
<i>Total, non-resident depositors</i>	<i>100.4</i>	<i>1.7</i>	<i>97.5</i>	<i>1.6</i>	<i>98.1</i>	<i>1.6</i>	<i>104.4</i>	<i>1.6</i>
<i>Total, all depositors</i>	<i>5,857.9</i>	<i>100.0</i>	<i>6,199.6</i>	<i>100.0</i>	<i>6,142.9</i>	<i>100.0</i>	<i>6,506.8</i>	<i>100.0</i>

(a) Excludes deposits of Commonwealth and State Governments. (b) Includes Papua and New Guinea.

**MAJOR TRADING BANKS: NEW AND INCREASED LENDING COMMITMENTS  
TO SELECTED INDUSTRIAL GROUPS(a), SIX MONTHS ENDED  
JULY 1969 TO JANUARY 1971**

(Source: Reserve Bank of Australia)

(\$ million)

	<i>Six months ended second Wednesday of—</i>							
	<i>July 1969</i>		<i>January 1970</i>		<i>July 1970</i>		<i>January 1971</i>	
	<i>Aggre- gate</i>	<i>Term loan com- ponent</i>	<i>Aggre- gate</i>	<i>Term loan com- ponent</i>	<i>Aggre- gate</i>	<i>Term loan com- ponent</i>	<i>Aggre- gate</i>	<i>Term loan com- ponent</i>
<i>Business—</i>								
Agriculture, grazing and dairying . . . . .	(b)161.5	22.8	(b)139.6	17.7	(b)125.7	14.0	(b)106.1	11.8
Manufacturing . . . . .	131.2	25.0	151.4	33.3	144.3	28.3	151.7	13.4
Finance . . . . .	31.2	0.7	28.4	0.1	26.8	0.3	62.8	0.2
Commerce(a) . . . . .	130.2	8.0	134.9	3.6	123.4	3.0	145.0	8.5
Building and construction . . . . .	53.1	1.2	45.5	1.2	44.4	1.4	64.3	19.5
<i>Persons—</i>								
Advances for building or purchase of own home (to individuals) . . . . .	98.5	..	96.6	..	88.6	..	90.4	..
Other (including personal loans) . . . . .	155.0	..	166.8	..	163.3	..	165.4	..
All other . . . . .	202.0	28.5	311.5	114.2	173.2	30.2	273.2	33.5
<i>Total</i>	<i>(b)962.6</i>	<i>86.2</i>	<i>(b)1,074.6</i>	<i>170.2</i>	<i>(b)889.7</i>	<i>77.1</i>	<i>(b)1,059.0</i>	<i>86.9</i>

(a) Excludes commitments in respect of temporary advances to woolbuyers. (b) Includes Farm Development Loan approvals: July 1969, \$15.7 million; January 1970, \$12.5 million; July 1970, \$7.5 million and January 1971, \$10.0 million.

**MAJOR TRADING BANKS: CLASSIFICATION OF OVERDRAFT LIMITS  
OUTSTANDING(a), JULY 1969 TO JANUARY 1971**

(Source: Reserve Bank of Australia)

(\$ million)

	<i>Second Wednesday of—</i>			
	<i>July 1969</i>	<i>January 1970</i>	<i>July 1970</i>	<i>January 1971</i>
<i>Resident borrowers—</i>				
Business overdraft limits—				
Agriculture, grazing and dairying—				
Mainly sheep grazing . . . . .	401.8	403.8	402.7	400.4
Mainly wheat growing . . . . .	121.8	125.0	125.7	127.6
Mainly dairying and pig raising . . . . .	120.9	117.1	114.3	105.5
Other . . . . .	278.4	286.3	289.3	299.4
Total, agriculture, etc. . . . .	922.9	932.2	932.0	932.8
Manufacturing . . . . .	1,193.6	1,222.7	1,229.2	1,255.5
Transport, storage and communication . . . . .	95.0	97.3	111.3	105.9
Finance—				
Building and housing societies . . . . .	61.9	65.7	66.2	63.7
Pastoral finance companies . . . . .	96.1	99.2	104.7	119.1
Hire purchase and other finance companies . . . . .	82.0	86.1	98.6	83.9
Other . . . . .	89.5	93.1	87.1	92.7
Total, finance . . . . .	329.4	344.2	356.6	359.4
Commerce(a)—				
Retail trade . . . . .	461.4	467.2	477.1	473.9
Wholesale trade . . . . .	314.4	323.2	365.5	389.5
Total, commerce(a) . . . . .	775.8	790.4	842.6	863.3
Building and construction . . . . .	196.1	196.1	197.9	194.6
Other businesses—				
Mining . . . . .	98.2	116.2	133.0	224.9
Other . . . . .	478.7	497.8	514.5	540.1
Total, other businesses . . . . .	576.9	614.0	647.5	765.0
Unclassified . . . . .	39.0	47.6	42.6	47.4
Total, business overdraft limits . . . . .	4,128.7	4,244.4	4,359.9	4,523.9
Overdraft limits of public authorities . . . . .	176.1	187.7	173.1	215.4
Personal overdraft limits—				
Building or purchasing own home . . . . .	349.2	350.1	349.3	350.7
Other . . . . .	519.1	550.6	587.0	605.4
Total, personal overdraft limits . . . . .	868.4	900.7	936.3	956.0
Overdraft limits of non-profit organisations . . . . .	118.2	119.2	124.2	121.2
Total, overdraft limits of resident borrowers . . . . .	5,291.3	5,452.0	5,593.5	5,816.6
Overdraft limits of non-resident borrowers . . . . .	3.8	4.2	4.8	6.5
Total, all overdraft limits . . . . .	5,295.2	5,456.2	5,598.3	5,823.1

(a) Excludes limits in respect of temporary advances to woolbuyers, term loans and farm development loans.



**MAJOR TRADING BANKS: ADVANCES(a), BY RATE OF INTEREST  
JUNE 1969 TO DECEMBER 1970**

(Source: Reserve Bank of Australia)

(Proportion at each rate to total—per cent)

Interest rate per annum	End of—			
	June 1969	December 1969	June 1970	December 1970
5 per cent and less . . . . .	3.4	4.3	3.1	4.4
More than 5 per cent but less than 5½ per cent . . . . .	0.4	0.8	0.6	0.8
5½ per cent . . . . .	0.7	0.2	0.1	0.2
More than 5½ per cent but less than 6 per cent . . . . .	0.7	0.9	0.1	0.2
6 per cent . . . . .	4.4	1.0	0.4	0.5
More than 6 per cent but less than 6½ per cent . . . . .	8.6	4.5	2.6	2.7
6½ per cent . . . . .	7.7	8.6	1.4	0.8
More than 6½ per cent but less than 7 per cent . . . . .	10.1	8.5	5.7	5.5
7 per cent . . . . .	17.0	8.8	10.1	9.9
More than 7 per cent but less than 7½ per cent . . . . .	11.1	15.8	9.3	8.4
7½ per cent . . . . .	34.5	9.1	9.0	8.4
More than 7½ per cent but less than 8 per cent . . . . .	..	35.7	13.1	13.0
8 per cent . . . . .	0.4	0.5	7.0	6.6
More than 8 per cent and up to 8½ per cent . . . . .	..	0.1	35.4	34.9
More than 8½ per cent . . . . .	1.0	1.2	2.2	3.8
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Excludes term loans, farm development loans and personal instalment loans. Comprises categories of loans specifically exempted from the prescribed maximum overdraft requirement such as, short-term mortgage and bridging loans and post-shipment wool advances subject to a disincentive rate of interest. The maximum rate chargeable on overdraft advances was raised to 7½ per cent per annum on 14 October 1968, 7½ per cent per annum on 1 August 1969 and 8½ per cent per annum on 9 March 1970.

**MAJOR TRADING BANKS: FIXED DEPOSITS(a), BY RATE  
OF INTEREST, JUNE 1969 TO DECEMBER 1970**

(Source: Reserve Bank of Australia)

(Proportion at each rate to total—per cent)

Interest rate per annum	End of—			
	June 1969	December 1969	June 1970	December 1970
More than 4 per cent but less than 4½ per cent . . . . .	..	..	..	..
4½ per cent and less than 4½ per cent . . . . .	30.3	1.3	0.1	..
4½ per cent and less than 4½ per cent . . . . .	39.8	52.0	14.1	3.1
4½ per cent and less than 5 per cent . . . . .	29.8	33.2	36.1	22.6
5 per cent and less than 5½ per cent . . . . .	..	13.4	22.5	29.6
5½ per cent and less than 5½ per cent . . . . .	..	..	6.4	16.4
5½ per cent and less than 5½ per cent . . . . .	..	..	20.8	27.5
5½ per cent and less than 6 per cent . . . . .	..	..	..	..
6 per cent and less than 6½ per cent . . . . .	..	..	..	0.1
6½ per cent and less than 6½ per cent . . . . .	..	..	..	..
6½ per cent . . . . .	..	..	..	0.7
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Excludes Commonwealth and State Government fixed deposits.

**TRADING BANKS: AVERAGE WEEKLY DEBITS TO CUSTOMERS'  
ACCOUNTS(a), STATES AND TERRITORIES, 1965-66 TO 1969-70**  
(\$ million)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1965-66	949.0	847.7	232.5	172.8	122.4	43.2	3.8	15.3	2,386.7
1966-67	1,080.2	940.0	256.9	184.4	138.6	47.3	4.5	17.0	2,668.9
1967-68	1,257.9	1,041.8	289.2	201.7	169.1	51.3	5.8	21.2	3,038.0
1968-69	1,526.0	1,214.1	325.3	224.2	209.0	55.9	7.4	50.4	3,612.6
1969-70	1,865.6	1,413.3	364.7	243.2	246.4	61.2	12.7	87.7	4,294.9

(a) Covers all trading banks and in addition the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank. Excludes debits to Commonwealth and State Government accounts in capital cities.

### Savings banks

For information on the origin of savings banks in Australia, see Year Book No. 50, page 854, and earlier issues.

All savings banks, including trustee savings banks, but not State savings banks, are subject to the *Banking Act* 1959-1967. Details of this Act and the special provisions applying to savings banks are given in Year Book No. 46, pages 759-60.

Not all savings banks use 30 June as the end of their accounting year. In the following tables balance sheet and profit and loss account information for the years 1969 and 1970 is shown for each bank as at the date on which its accounting year ends. The dates used are: 30 June—Commonwealth Savings Bank of Australia, The Commercial Savings Bank of Australia, C.B.C. Savings Bank Ltd, The State Savings Bank of Victoria and The Savings Bank of South Australia; 30 September—Australia and New Zealand Savings Bank Ltd, E.S. & A. Savings Bank Ltd, The Bank of Adelaide Savings Bank Ltd, Bank of New South Wales Savings Bank Ltd and The National Bank Savings Bank Ltd; 31 August—The Hobart Savings Bank and Launceston Bank for Savings. As from 1 October 1970, the Australia and New Zealand Savings Bank Ltd took over the banking business of the E.S. & A. Savings Bank Ltd. These tables relate to liabilities and assets both inside and outside Australia.

The information in the following tables for the Commonwealth Savings Bank, the trustee savings banks and the private savings banks has been obtained from the annual returns lodged with the Commonwealth Statistician under Section 53 of the *Banking Act* 1959-1967, whereas that for State savings banks has been compiled from information in their published annual reports. Particulars for the Commonwealth Savings Bank, The State Savings Bank of Victoria, The Savings Bank of South Australia, The Rural and Industries Bank of Western Australia and the Hobart Savings Bank relate to the end of the month, those for the Launceston Bank for Savings to the last Monday in the month, and those for the other savings banks to the last Wednesday in the month.

The number of operative accounts excludes school bank accounts and small inoperative accounts. The other sections of the tables relating to depositors' balances, etc., include school bank accounts, small inoperative accounts, investment accounts, deposit stock and non-interest bearing cheque accounts at the State Savings Bank of Victoria and the Savings Bank of South Australia, and fixed deposit accounts and non-interest bearing cheque accounts at the trustee savings banks in Tasmania.

At 30 June 1970 all savings banks were paying interest on deposits at rates of up to 5.00 per cent. For accounts other than friendly and other societies the maximum interest bearing amount in any one account was \$20,000. There is no limit on the maximum interest bearing amount for society cheque accounts. Interest rates charged on loans made by the savings banks were: housing loans—up to 7.00 per cent; other loans—up to 8.25 per cent.

**SAVINGS BANKS: NUMBER OF BRANCHES(a) AND AGENCIES  
STATES AND TERRITORIES, 30 JUNE 1970**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Branches—</b>									
Metropolitan area . . .	811	1,088	269	306	235	41	4	39	2,793
Elsewhere . . .	858	732	490	268	221	111	10	..	2,690
<b>Total branches . . .</b>	<b>1,669</b>	<b>1,820</b>	<b>759</b>	<b>574</b>	<b>456</b>	<b>152</b>	<b>14</b>	<b>39</b>	<b>5,483</b>
<b>Total agencies . . .</b>	<b>4,375</b>	<b>3,359</b>	<b>2,526</b>	<b>2,420</b>	<b>1,773</b>	<b>620</b>	<b>161</b>	<b>180</b>	<b>15,414</b>

(a) Includes head offices.

**SAVINGS BANKS: LIABILITIES(a), 1969 AND 1970  
(\$'000)**

<i>Bank</i>	<i>Paid-up capital</i>	<i>Reserve funds (used in the business of the bank)</i>	<i>Balance of profit and loss account</i>	<i>Total share-holders' funds</i>	<i>Depositors' balances</i>	<i>Balances due to other banks</i>	<i>Bills payable and all other liabilities (b)</i>	<i>Total</i>
<b>1970—</b>								
Commonwealth Savings Bank of Australia . . .	..	38,872	..	(c)38,872	2,958,742	1,930	96,744	3,096,289
State savings banks(d)—								
The State Savings Bank of Victoria(e)	..	36,453	1,318	(c)37,771	1,163,596	8,271	54,228	1,263,865
The Savings Bank of South Australia . . .	..	29,446	179	(c)29,625	416,307	4,023	452	450,407
Trustee savings banks—								
The Hobart Savings Bank	..	2,600	115	2,715	54,561	1	263	57,540
Launceston Bank for Savings . . .	..	2,300	124	2,424	49,915	..	223	52,561
Private savings banks—								
Australia and New Zealand Savings Bank Ltd	5,000	7,550	451	13,001	489,574	..	19,840	522,415
The Bank of Adelaide Savings Bank Ltd . . .	1,000	750	216	1,966	38,964	..	745	41,675
Bank of New South Wales Savings Bank Ltd . . .	14,000	4,500	3,555	22,055	991,068	..	35,368	1,048,492
The Commercial Savings Bank of Australia Ltd . . .	3,000	2,550	384	5,934	197,136	..	4,901	207,971
C.B.C. Savings Bank Ltd	4,000	5,200	350	9,550	276,195	..	6,270	292,015
E.S. & A. Savings Bank Ltd . . .	2,000	3,150	59	5,209	194,429	..	8,322	207,959
The National Bank Savings Bank Ltd . . .	2,000	4,000	581	6,581	330,691	..	9,281	346,552
<b>Total, all savings banks(d), 1970</b>	<b>31,000</b>	<b>137,372</b>	<b>7,331</b>	<b>175,703</b>	<b>7,161,178</b>	<b>14,225</b>	<b>236,635</b>	<b>7,587,741</b>
<b>Total, all savings banks(d), 1969</b>	<b>25,000</b>	<b>132,711</b>	<b>6,732</b>	<b>164,443</b>	<b>6,783,540</b>	<b>13,387</b>	<b>222,199</b>	<b>7,183,570</b>

(a) For dates of balance sheets see page 486.

(b) Includes provision for contingencies.

(c) Total reserve funds.

(d) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia.

(e) Includes Credit Foncier Department.

**SAVINGS BANKS: ASSETS(a), 1969 AND 1970**  
(\$'000)

Bank	Coin, bullion, notes and deposits with Reserve Bank	Deposits in Australia with trading banks	Australian public securities		Local and semi- government authorities	Other securities
			Commonwealth and States			
			Treasury bills and notes	Other securities		
1970—						
Commonwealth Savings Bank of Australia	294,890	38,410	6,664	1,217,134	458,365	601
State savings banks(d)—						
The State Savings Bank of Victoria(e)	83,167	21,519	..	247,762	398,564	..
The Savings Bank of South Australia	14,768	23 117	..	138,858	89,107	..
Trustee savings banks—						
The Hobart Savings Bank	992	3,409	..	9,552	25,491	..
Launceston Bank for Savings	197	3,129	..	11,810	17,525	..
Private savings banks—						
Australia and New Zealand Savings Bank Ltd	21,650	6,625	28,588	119,417	140,569	12,478
The Bank of Adelaide Savings Bank Ltd	3,900	407	..	6,550	13,168	..
Bank of New South Wales Savings Bank Ltd	76,100	27,441	27,606	224,751	324,916	3,027
The Commercial Savings Bank of Australia Ltd	19,200	6,776	700	30,053	79,535	400
C.B.C. Savings Bank Ltd	27,900	10,235	..	96,915	68,834	..
E.S. & A. Savings Bank Ltd	18,255	2,842	1,350	43,031	64,793	..
The National Bank Savings Bank Ltd	24,100	6,896	9,800	86,814	111,017	..
Total, all savings banks(d), 1970	585,119	150,807	74,708	2,232,647	1,791,884	16,506
Total, all savings banks(d), 1969	553,467	168,686	61,012	2,246,616	1,649,893	14,716

<i>Bank</i>	<i>Loans to authorised dealers in short-term money market</i>	<i>Cheques and bills of, and balances with and due from other banks(b)</i>	<i>Loans(c) advances and bills discounted</i>	<i>Bank premises furniture and sites</i>	<i>Bills receivable and re- mitances in transit</i>	<i>All other assets</i>	<i>Total</i>
<b>1970—</b>							
Commonwealth Savings Bank of Australia	..	143,815	849,017	55,486	435	31,470	3,096,289
State savings banks(d)—							
The State Savings Bank of Victoria(e)	10,390	6,933	461,107	17,400	..	17,024	1,263,865
The Savings Bank of South Australia	5,200	..	166,587	8,081	(f)	4,688	450,407
Trustee savings banks—							
The Hobart Savings Bank	2,385	130	13,417	1,124	9	1,033	57,540
Launceston Bank for Savings	1,750	56	16,128	988	..	979	52,561
Private savings banks—							
Australia and New Zealand Savings Bank Ltd	22,900	1,985	164,111	..	..	4,093	522,415
The Bank of Adelaide Savings Bank Ltd	3,550	200	13,003	480	..	417	41,675
Bank of New South Wales Savings Bank Ltd	..	11,698	331,551	10,660	..	10,742	1,048,492
The Commercial Savings Bank of Australia Ltd	1,500	500	66,912	524	..	1,870	207,971
C.B.C. Savings Bank Ltd	..	800	84,746	1,425	..	1,160	292,015
E.S. & A. Savings Bank Ltd	4,400	750	68,444	2,068	..	2,025	207,959
The National Bank Savings Bank Ltd	2,000	900	102,226	..	..	2,799	346,552
<b>Total, all savings banks(d), 1970</b>	<b>54,075</b>	<b>167,766</b>	<b>2,337,250</b>	<b>98,237</b>	<b>444</b>	<b>78,300</b>	<b>7,587,741</b>
<b>Total, all savings banks(d), 1969</b>	<b>40,110</b>	<b>9,664</b>	<b>2,270,490</b>	<b>90,504</b>	<b>2,015</b>	<b>76,398</b>	<b>7,183,570</b>

(a) For date of balance sheets see page 486. (b) Including deposits with and loans to specified banks other than Trading Banks. (c) Other than loans to authorised dealers in the short-term money market. (d) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (e) Includes *Credit Foncier* Department. (f) Not available. Included in All other assets.



## SAVINGS BANKS: PROFIT AND LOSS, APPROPRIATION OF PROFITS(a) AND DIVIDENDS, 1969 AND 1970

(\$'000)

Bank	Profit and loss			Profits appropriated to—					Dividends(e)	
	Net earnings (b)	Ex-penses (c)	Income land and other taxes and pay-ments in lieu of taxes	Net profit	Reserve funds (d)	Writing-off bank premises	Other appro-priations	Paid and proposed	Rates per annum per cent	
1970—										
Commonwealth Savings Bank of Australia . . . . .	59,470	52,986	788	5,696	1,512	1,471	(f)2,713	..	..	
State savings banks(g)—										
The State Savings Bank of Victoria(h) . . . . .	26,285	23,698	n.a.	2,587	1,918	300	300	..	..	
The Savings Bank of South Australia . . . . .	7,109	6,608	n.a.	501	500	(i)	..	..	..	
Trustee savings banks—										
The Hobart Savings Bank	978	757	36	184	135	44	5	..	..	
Launceston Bank for Savings . . . . .	924	762	18	144	50	45	23	..	..	
Private savings banks—										
Australia and New Zealand Savings Bank Ltd	10,833	8,320	1,215	1,297	1,600	..	..	..	..	
The Bank of Adelaide Savings Bank Ltd . . . . .	1,027	558	172	298	200	..	..	100	10	
Bank of New South Wales Savings Bank Ltd . . . . .	22,400	15,315	3,275	3,809	1,000	..	..	2,000	14.2857	
The Commercial Savings Bank of Australia Ltd	4,101	2,366	882	853	450	20	..	375	12.5	
C.B.C. Savings Bank Ltd	5,617	3,576	917	1,124	700	..	..	400	10	
E.S. & A. Savings Bank Ltd . . . . .	4,287	2,438	1,072	777	800	..	..	..	..	
The National Bank Savings Bank Ltd . . . . .	6,575	4,063	1,221	1,291	1,000	..	..	300	15	
Total, all savings banks(g), 1970 . . . . .	149,606	121,448	9,597	18,561	9,865	1,880	3,042	3,175	..	
Total, all savings banks(g), 1969 . . . . .	131,167	108,509	7,680	14,979	7,036	2,010	2,255	3,400	..	

(a) For balance dates see page 486. (b) Discount and interest earned, net exchange, commissions and other items (including transfers from contingencies accounts), after deducting interest paid and accrued on deposits, rebate on bills current at balance date, amounts written off assets, and losses on realisation of assets and transfers to the credit of contingencies accounts (out of which accounts provisions for all bad and doubtful debts have been made). (c) Includes directors' fees. (d) Excludes accumulated profits and profit and loss accounts. (e) Dividends paid or payable out of profits earned during year. (f) Provisions for settlements under Savings Bank Amalgamation Agreements, \$1,201,595 and Commonwealth of Australia, \$1,511,842. (g) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (h) Includes Credit Foncier Department. (i) Included in expenses.

## SAVINGS BANKS: ASSETS WITHIN AUSTRALIA(a), END OF JUNE 1969 AND 1970

(\$ million)

	June 1969	June 1970 (b)
Coin, bullion and Australian notes . . . . .	16.6	17.5
Deposits with Reserve Bank . . . . .	536.0	612.9
Deposits in Australia with trading banks . . . . .	152.7	135.1
Australian public securities—		
Commonwealth and States (including Treasury bills and Treasury notes) . . . . .	2,300.6	2,261.4
Local government and semi-government authorities . . . . .	1,651.7	1,800.9
Other securities . . . . .	9.4	17.5
Loans to authorised dealers in the short-term money market . . . . .	31.2	37.1
Cheques and bills of other banks and balances with and due from other banks . . . . .	1.5	154.0
Loans, advances and bills discounted—		
Housing . . . . .	1,961.5	2,144.2
Other . . . . .	301.9	195.6
Bank premises, furniture and sites . . . . .	92.2	99.4
Bills receivable and all other assets . . . . .	24.9	28.2
Total . . . . .	7,080.2	7,503.8

(a) Includes assets in Papua, New Guinea and other external Territories. Excludes inter-bank accounts and contingencies. (b) From May 1970, deposits with and loans to prescribed banks other than trading banks were transferred from 'other loans advances and bills discounted' to 'cheques and bills of other banks and balances with and due from other banks'.

## SAVINGS BANKS: BUSINESS TRANSACTED IN AUSTRALIA, 1968-69 AND 1969-70

State or Territory	1968-69					1969-70				
	Number of operative accounts at end of year '000	De- posits (a) \$m	With- draws (a) \$m	In- terest added \$m	Depos- itors' balances at end of year \$m	Number of operative accounts at end of year '000	De- posits (a) \$m	With- draws (a) \$m	In- terest added \$m	Depos- itors' balances at end of year \$m
New South Wales	5,042	3,040.2	2,959.0	75.4	2,282.4	5,279	3,394.0	3,357.1	81.5	2,400.8
Victoria . .	4,452	3,352.8	3,261.7	67.7	2,244.3	4,694	3,810.2	3,741.2	73.5	2,386.8
Queensland . .	1,907	1,072.8	1,037.9	27.1	819.0	2,011	1,247.1	1,220.2	29.6	875.6
South Australia . .	1,472	941.6	917.5	24.0	691.8	1,5-6	1,087.8	1,072.8	26.3	733.1
Western Australia	1,036	663.7	637.3	13.0	413.0	1,096	719.3	714.7	14.3	431.9
Tasmania . .	451	217.5	211.8	6.5	190.0	466	244.4	241.8	7.1	199.8
Northern Territory	52	36.2	33.7	0.5	17.4	61	49.6	46.3	0.6	21.3
Australian Capital Territory . .	122	99.0	95.1	1.5	49.1	138	119.3	114.8	1.8	55.4
Australia . .	14,534	9,423.8	9,154.1	215.8	6,707.1	15,291	10,671.9	10,508.9	234.6	7,104.7

(a) Includes inter-branch transfers.

## SAVINGS BANKS: DEPOSITORS' BALANCES PER HEAD OF POPULATION IN AUSTRALIA, JUNE 1966 TO 1970

(\$)

End of June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966 . .	431.29	542.19	380.84	510.38	345.32	399.53	187.34	328.54	452.92
1967 . .	460.73	588.42	411.39	544.47	377.48	443.93	210.80	367.00	488.11
1968 . .	485.10	627.42	437.07	572.21	410.86	465.48	226.16	387.48	517.13
1969 . .	509.99	663.07	463.38	604.82	436.83	489.22	255.67	402.67	545.50
1970 . .	525.70	693.05	486.63	629.41	440.84	509.08	299.52	416.51	566.05

## SCHOOL SAVINGS BANKS: AUSTRALIA, JUNE 1966 TO 1970

End of June—	Number of school agencies	Number of operative accounts	Depositors' balances	Average balance per operative account
			'000	\$
1966 . . . .	9,999	1,390	23,313	16.77
1967 . . . .	10,301	1,445	24,815	17.18
1968 . . . .	10,400	1,516	26,482	17.47
1969 . . . .	10,957	1,584	28,476	17.98
1970 . . . .	11,042	1,600	28,079	17.55

**SAVINGS BANKS: HOUSING FINANCE TRANSACTIONS WITHIN AUSTRALIA  
HOUSING LOANS APPROVED TO INDIVIDUALS, 1969-70**

<i>State or Territory</i>	<i>Dwellings not previously occupied</i>		<i>Dwellings previously occupied</i>		<i>Alterations and additions</i>	<i>Total housing loans approved to individuals</i>
	<i>Number(a)</i>	<i>\$'000(b)</i>	<i>Number(a)</i>	<i>\$'000(b)</i>	<i>\$'000</i>	<i>\$'000</i>
New South Wales . . .	5,977	45,027	13,001	92,628	2,880	140,535
Victoria . . . . .	11,283	95,724	11,933	92,309	2,046	190,079
Queensland . . . . .	3,709	27,699	3,807	23,943	970	52,612
South Australia(c) . . .	2,343	18,369	3,846	27,153	642	46,164
Western Australia . . .	1,578	12,599	1,906	13,695	906	27,200
Tasmania . . . . .	444	3,357	865	5,542	289	9,188
Australian Capital Territory .	219	1,474	211	1,885	45	3,404
<b>Total . . . . .</b>	<b>25,553</b>	<b>204,249</b>	<b>35,569</b>	<b>257,155</b>	<b>7,778</b>	<b>469,182</b>

(a) Number of dwelling units for which first mortgage loans approved.  
complete original purchase or construction.

(b) Includes second mortgage finance to  
(c) Includes Northern Territory.

**SAVINGS BANKS: HOUSING FINANCE TRANSACTIONS WITHIN AUSTRALIA  
CANCELLATIONS, UNDRAWN COMMITMENTS AND LOANS OUTSTANDING, 1969-70**

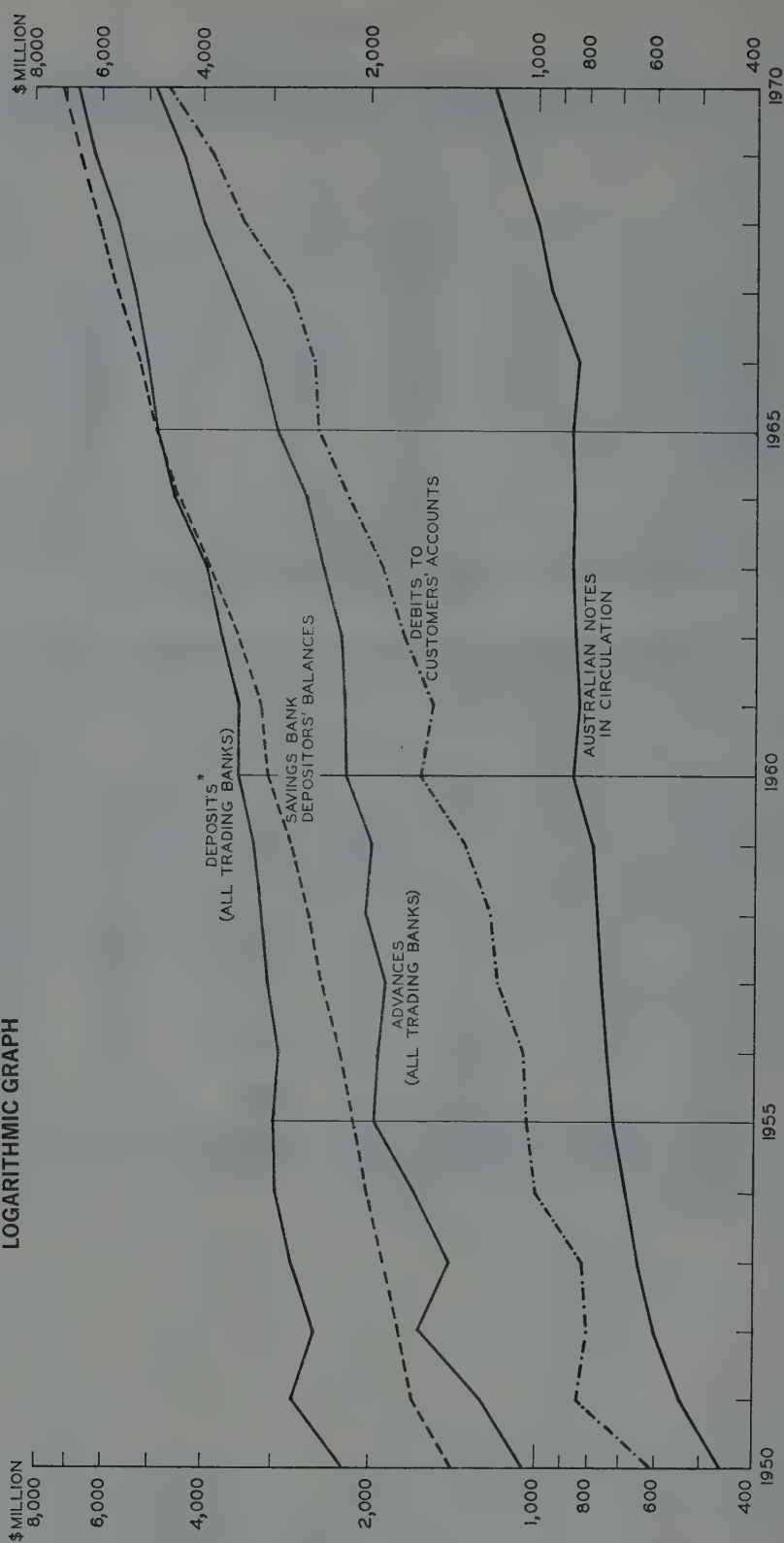
<i>State or Territory</i>	<i>Loans approved to individuals</i>			<i>Balances outstanding on housing loans to—</i>	
	<i>Cancellations of loans previously approved(a)</i>		<i>Undrawn commitments at end of year</i>	<i>Individuals</i>	<i>Building societies</i>
	<i>Number(b)</i>	<i>\$'000(c)</i>	<i>\$'000</i>		
New South Wales . . . .	1,895	13,431	41,366	524,010	129,647
Victoria . . . . .	837	7,144	46,910	748,483	83,132
Queensland . . . . .	387	2,596	9,975	196,498	19,470
South Australia(d) . . .	278	1,818	7,322	254,401	..
Western Australia . . .	122	846	5,755	120,144	10,127
Tasmania . . . . .	78	525	2,353	45,487	2,127
Australian Capital Territory .	18	91	729	9,258	815
<b>Total . . . . .</b>	<b>3,615</b>	<b>26,451</b>	<b>114,410</b>	<b>(e)1,898,281</b>	<b>245,318</b>

(a) Includes amounts cancelled as a result of periodic examinations by banks of undrawn commitments. (b) Number of dwelling units for which first mortgage loans approved. (c) Includes second mortgage finance to complete original purchase or construction. (d) Includes Northern Territory. (e) Includes interest debited to loan accounts, \$106,888,000.

# BANKING: AUSTRALIA

## 1950 TO 1970

LOGARITHMIC GRAPH



\* EXCLUDES COMMONWEALTH AND STATE GOVERNMENTS



## Development banks

## Commonwealth Development Bank of Australia

The Commonwealth Development Bank of Australia was established by the *Commonwealth Banks Act* 1959 and commenced operations on 14 January 1960. It was formed basically from an amalgamation of the Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank. Under the Act the Bank is authorised to provide assistance for the development of worthwhile enterprises in the fields of primary and secondary industries, which would otherwise be unable to obtain the necessary finance on reasonable and suitable terms and conditions. The Commonwealth Development Bank is managed by a General Manager under the Managing Director of the Commonwealth Banking Corporation, and its policy is determined by the Board of that Corporation. The capital of the Development Bank consists of the capital of the Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank immediately prior to 14 January 1960, \$10 million provided by the Reserve Bank, \$20 million appropriated from the Consolidated Revenue Fund in 1961-62 by the *Commonwealth Banks Act* 1961 and the *Commonwealth Banks Act* 1962, \$10 million appropriated in 1963-64 by the *Commonwealth Banks Act* 1963, and such other sums as are provided from the Commonwealth Development Bank Reserve Fund. The net profits of the Bank are paid to the Commonwealth Development Bank Reserve Fund, which at 30 June 1970 stood at \$29.3 million. Net profits in 1968-69 and 1969-70 amounted to \$1.9 million and \$2.1 million respectively.

COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA: LIABILITIES  
30 JUNE 1966 TO 1970

(\$ million)

30 June—	Capital	Reserve fund	Balances due to other banks	Deposits, bills payable, all other liabilities	Total
1966 . . .	61.7	21.2	65.9	27.8	176.6
1967 . . .	61.7	23.2	91.3	30.0	206.1
1968 . . .	61.7	25.2	112.8	32.3	232.0
1969 . . .	61.7	27.2	131.3	34.7	254.9
1970 . . .	61.7	29.3	142.2	36.7	269.8

COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA: ASSETS  
30 JUNE 1966 TO 1970

(\$ million)

30 June—	Coin, bullion, notes and cash at bankers	Australian public securities (incl. Treasury bills)	Other securities	Loans to authorised dealers in short-term money market	Cheques and bills of other banks	Loans, advances, and bills discounted	All other assets	Total
1966 . . .	0.5	1.2	0.3	0.4	1.1	172.6	0.6	176.6
1967 . . .	0.3	1.2	0.3	0.5	1.2	202.0	0.6	206.1
1968 . . .	0.5	1.2	0.3	0.4	1.4	227.5	0.8	232.0
1969 . . .	0.8	1.2	0.2	..	1.5	250.2	0.9	254.9
1970 . . .	0.8	0.8	0.3	..	1.7	265.3	1.0	269.8

**Australian Resources Development Bank Limited**

The Australian Resources Development Bank Limited was established in 1967 with equity capital of \$3 million subscribed by the major trading banks. It was given the status of a bank by the *Banking Act* 1967 and opened for business on 29 March 1968. The main object of the Australian Resources Development Bank is to assist Australian enterprises to participate more fully in the development of Australia's natural resources. It provides finance to enterprises engaged in major developmental projects by direct loans, investing in equity capital or by refinancing loans made by trading banks acting individually or as a group. The Australian Resources Development Bank obtains funds by accepting deposits and by borrowing on the Australian and overseas capital markets.

**AUSTRALIAN RESOURCES DEVELOPMENT BANK LIMITED: LIABILITIES**  
**30 SEPTEMBER 1968 TO 1970**  
(\$ million)

30 September—	Capital	Reserve fund	Balances due to other banks	Deposits, bills payable, all other liabilities	Total
1968 . . .	3.0	..	2.3	28.2	33.4
1969 . . .	3.0	0.3	15.4	73.2	91.9
1970 . . .	3.0	0.5	27.7	163.6	194.8

**AUSTRALIAN RESOURCES DEVELOPMENT BANK LIMITED: ASSETS**  
**30 SEPTEMBER 1968 TO 1970**  
(\$ million)

30 September—	Coin, bullion, notes and cash at bankers	Australian public securities (incl. Treasury bills)	Other securities	Loans to authorised dealers in short-term money market	Cheques and bills of other banks	Loans, advances, and bills discounted	All other assets	Total
1968 . . .	1.2	0.5	..	0.5	24.3	6.8	0.2	33.4
1969 . . .	0.3	0.2	..	0.1	89.8	1.0	0.4	91.9
1970 . . .	..	0.2	..	3.0	187.3	3.1	1.1	194.8

**INSURANCE****Legislation**

Section 51 of the Commonwealth Constitution confers the necessary powers on the Commonwealth Parliament to legislate with respect to 'insurance other than State insurance; also State insurance extending beyond the limits of the State concerned'. Commonwealth legislation includes the *Marine Insurance Act* 1909–1966 defining the limits of marine insurance and regulating the terms of contracts, etc., the *Insurance Act* 1932–1966 requiring the lodgment of deposits by insurance companies, and the *Life Insurance Act* 1945–1965 generally regulating life insurance business in Australia. The *Marine Insurance Act* 1909–1966 and the *Insurance Act* 1932–1966 have limited application, and except for life insurance business, which is regulated by the *Life Insurance Act* 1945–1965, insurance business is conducted almost entirely under State laws.

**Insurance Act 1932-1966**

Companies, persons or associations of persons carrying on insurance business in Australia or in any Territory of Australia are required to lodge a deposit with the Commonwealth Treasurer. Money deposited is invested by the Treasurer in prescribed securities selected by the depositor, and all interest is paid to depositors. Deposits remain as security against liability to policy holders, and are available to satisfy judgments obtained in respect of policies. Deposits held by States on 1 February 1932 could, however, remain with the States subject to the conditions embodied in the laws of the States, and depositors to the extent of the value of these deposits were exempt from liability to make deposits under the Commonwealth Act.

The following are not regarded as insurance business under the Act: staff superannuation schemes; schemes of religious organisations solely for insurance of their property; friendly society, union and association schemes involving superannuation or insurance benefits to employees.

This Act does not apply to State insurance within the limits of the State concerned, and under the *Life Insurance Act 1945-1965* ceased to apply to life insurance business.

**Life Insurance Act 1945-1965**

The objects of this Act are: (a) to replace all State legislation on the subject of life insurance, except that relating to the life insurance operations of State Government insurance offices within the State concerned, and to provide uniform legislation for the whole of Australia; (b) to appoint an Insurance Commissioner to exercise active supervision of the activities of life insurance companies, with a view to securing the greatest possible protection for policy holders; (c) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency. The Act came into operation on 20 June 1946. A summary of the provisions of the Act is given in Year Book No. 37, pages 595-7. The Insurance Commissioner issues an annual report which contains detailed information on the operations of life insurance companies.

**Deposits under Insurance Acts**

Deposits lodged under the Insurance Acts at 30 June 1970 totalled \$38.1 million, comprising \$4.7 million held by the Commonwealth in respect of life insurance, and \$33.4 million held by the Commonwealth in respect of other forms of insurance. The deposits consisted of Commonwealth Government securities \$22.1 million, United Kingdom Government securities \$2.3 million, fixed deposits \$0.6 million, bank guarantees and undertakings \$9.3 million, corporation debentures and stock \$0.9 million, and titles and mortgages \$2.8 million.

**Life insurance**

Since 1947, returns lodged under the *Life Insurance Act 1945-1965* have been used to compile life insurance statistics. The statistics included in the following tables relate to the Australian and overseas business of companies with head offices in Australia together with the Australian business of companies with head offices overseas. Unless otherwise stated, life insurance business in Australia excludes life insurance business in Papua and New Guinea. The information shown has been compiled from returns of life insurance business submitted in the financial years which ended during the year stated.

**Offices transacting business**

The number of offices which transacted life insurance business in Australia during 1969 was 48, including 2 State Government institutions which conduct life insurance business only in their own States. Of the remaining 46 offices, 33 were companies incorporated outside Australia or were subsidiaries of such companies. Nine companies, including 4 incorporated outside Australia, were mutual companies. All companies conducted ordinary business and 44 conducted superannuation business. Industrial business was conducted by 12 companies, 11 of which also conducted superannuation business.

## LIFE INSURANCE: SUMMARY, AUSTRALIA, 1965 TO 1969

Year	Insurance and endowment policies			Annuity policies	
	Number of policies	Sum insured (\$ million)	Annual premiums (\$ million)	Number of policies	Annuities per annum (\$ million)
ORDINARY BUSINESS					
New policies issued—					
1965(a)	370,300	1,650.8	37.9	102	0.1
1966(a)	380,276	1,816.9	40.4	75	0.1
1967(a)	409,403	2,102.5	47.3	85	0.1
1968(a)	436,928	2,606.6	59.1	95	0.1
1969	464,062	3,088.4	65.7	109	0.1
Policies discontinued or reduced(b)—					
1965(a)	233,122	579.7	14.4	224	0.1
1966(a)	250,789	651.4	16.1	149	0.1
1967(a)	246,139	709.4	17.4	210	0.1
1968(a)	258,639	799.7	18.2	186	0.1
1969	248,906	974.3	20.3	181	0.1
Policies existing at end of—					
1965(a)	4,058,813	10,457.6	275.0	2,467	1.0
1966(a)	4,188,300	11,623.0	299.3	2,393	1.0
1967(a)	4,351,564	13,016.1	329.2	2,268	1.0
1968(a)	4,529,853	14,823.0	370.1	2,177	1.1
1969	4,676,164	16,806.1	411.7	2,065	1.3
INDUSTRIAL BUSINESS					
New policies issued—					
1965(a)	130,249	120.3	4.8	..	..
1966(a)	132,246	130.3	5.1	..	..
1967(a)	136,764	140.4	5.5	..	..
1968(a)	132,504	145.7	5.8	..	..
1969	139,360	165.0	6.5	..	..
Policies discontinued or reduced(b)—					
1965(a)	226,080	72.6	3.3	..	..
1966(a)	243,759	82.7	3.7	..	..
1967(a)	177,219	77.7	3.3	..	..
1968(a)	174,576	86.3	3.7	..	..
1969	169,893	91.1	3.8	..	..
Policies existing at end of—					
1965(a)	2,755,146	870.9	36.7	..	..
1966(a)	2,643,633	918.5	38.1	..	..
1967(a)	2,603,178	981.2	40.3	..	..
1968(a)	2,561,106	1,040.6	42.4	..	..
1969	2,530,386	1,114.4	45.1	..	..
SUPERANNUATION BUSINESS					
New policies issued—					
1965(a)	88,798	906.8	23.0	65	6.4
1966(a)	105,455	929.4	26.5	57	3.8
1967(a)	88,478	1,053.3	29.4	81	8.6
1968(a)	89,085	1,328.1	33.1	83	6.3
1969	94,771	1,591.6	41.7	64	5.0
Policies discontinued or reduced(b)—					
1965(a)	60,143	401.9	8.9	192	9.6
1966(a)	66,716	401.6	10.0	45	4.0
1967(a)	73,319	434.7	11.3	44	3.1
1968(a)	67,338	539.8	14.3	60	7.0
1969	114,664	709.1	17.7	43	7.8
Policies existing at end of—					
1965(a)	645,837	3,599.1	100.4	853	23.5
1966(a)	684,576	4,126.9	117.2	868	23.3
1967(a)	699,735	4,745.4	135.3	905	28.8
1968(a)	721,482	5,533.7	154.2	928	28.1
1969	752,302	6,439.2	179.2	950	25.4

(a) Includes life insurance business in Papua and New Guinea. (b) Includes policies matured, surrendered, forfeited, transferred to overseas registers, converted to other classes of business, etc.



**LIFE INSURANCE: POLICIES EXISTING IN AUSTRALIA, STATES  
AND TERRITORIES, 1969**

<i>State or Territory(a)</i>	<i>Insurance and endowment policies</i>				<i>Annuity policies</i>		
	<i>Number of policies</i>	<i>Sum insured (\$'000)</i>	<i>Bonus additions (\$'000)</i>	<i>Annual premiums (\$'000)</i>	<i>Number of policies</i>	<i>Annuities per annum (\$'000)</i>	<i>Annual premiums (\$'000)</i>
<b>ORDINARY BUSINESS</b>							
New South Wales	1,382,614	4,621,151	534,265	120,336	717	434	4
Victoria . . .	1,215,130	4,485,109	492,069	111,092	709	484	3
Queensland . .	800,475	2,519,968	311,619	59,323	144	55	..
South Australia .	523,417	1,588,831	171,107	41,321	195	70	1
Western Australia	385,526	1,394,642	138,177	33,739	126	53	2
Tasmania . . .	155,925	511,649	58,346	12,732	44	21	2
Northern Territory	12,089	69,233	4,407	1,624	..	..	..
Australian Capital Territory .	200,988	1,615,478	103,347	31,547	130	137	1
<b>Australia .</b>	<b>4,676,164</b>	<b>16,806,060</b>	<b>1,813,336</b>	<b>411,715</b>	<b>2,065</b>	<b>1,253</b>	<b>13</b>
<b>INDUSTRIAL BUSINESS</b>							
New South Wales	949,906	430,227	40,543	17,390	..	..	..
Victoria . . .	743,268	329,395	31,307	13,057	..	..	..
Queensland . .	336,471	143,783	13,111	6,039	..	..	..
South Australia .	(b)257,049	(b)101,077	(b)9,326	(b)4,163	..	..	..
Western Australia	168,991	75,605	7,031	3,106	..	..	..
Tasmania . . .	54,613	23,253	2,170	922	..	..	..
Northern Territory	(b)	(b)	(b)	(b)	..	..	..
Australian Capital Territory .	20,088	11,084	1,056	453	..	..	..
<b>Australia .</b>	<b>2,530,386</b>	<b>1,114,424</b>	<b>104,544</b>	<b>45,130</b>	<b>..</b>	<b>..</b>	<b>..</b>
<b>SUPERANNUATION BUSINESS</b>							
New South Wales	317,186	621,323	64,019	20,071	124	2,475	730
Victoria . . .	121,010	2,114,374	92,778	52,951	595	3,536	1,843
Queensland . .	77,063	407,451	29,198	12,936	12	5	..
South Australia .	48,885	341,571	30,033	11,588	34	30	5
Western Australia	41,843	257,276	20,384	8,613	20	1,340	124
Tasmania . . .	13,930	132,037	12,564	4,255	24	41	6
Northern Territory	432	4,995	236	164	..	..	..
Australian Capital Territory .	131,953	2,560,191	81,215	68,604	141	17,931	5,680
<b>Australia .</b>	<b>752,302</b>	<b>6,439,218</b>	<b>330,426</b>	<b>179,181</b>	<b>950</b>	<b>25,357</b>	<b>8,387</b>

(a) Location of register of policies.  
for South Australia.

(b) Industrial business for Northern Territory is included in industrial business

# LIFE INSURANCE: AUSTRALIA

## 1950 TO 1969

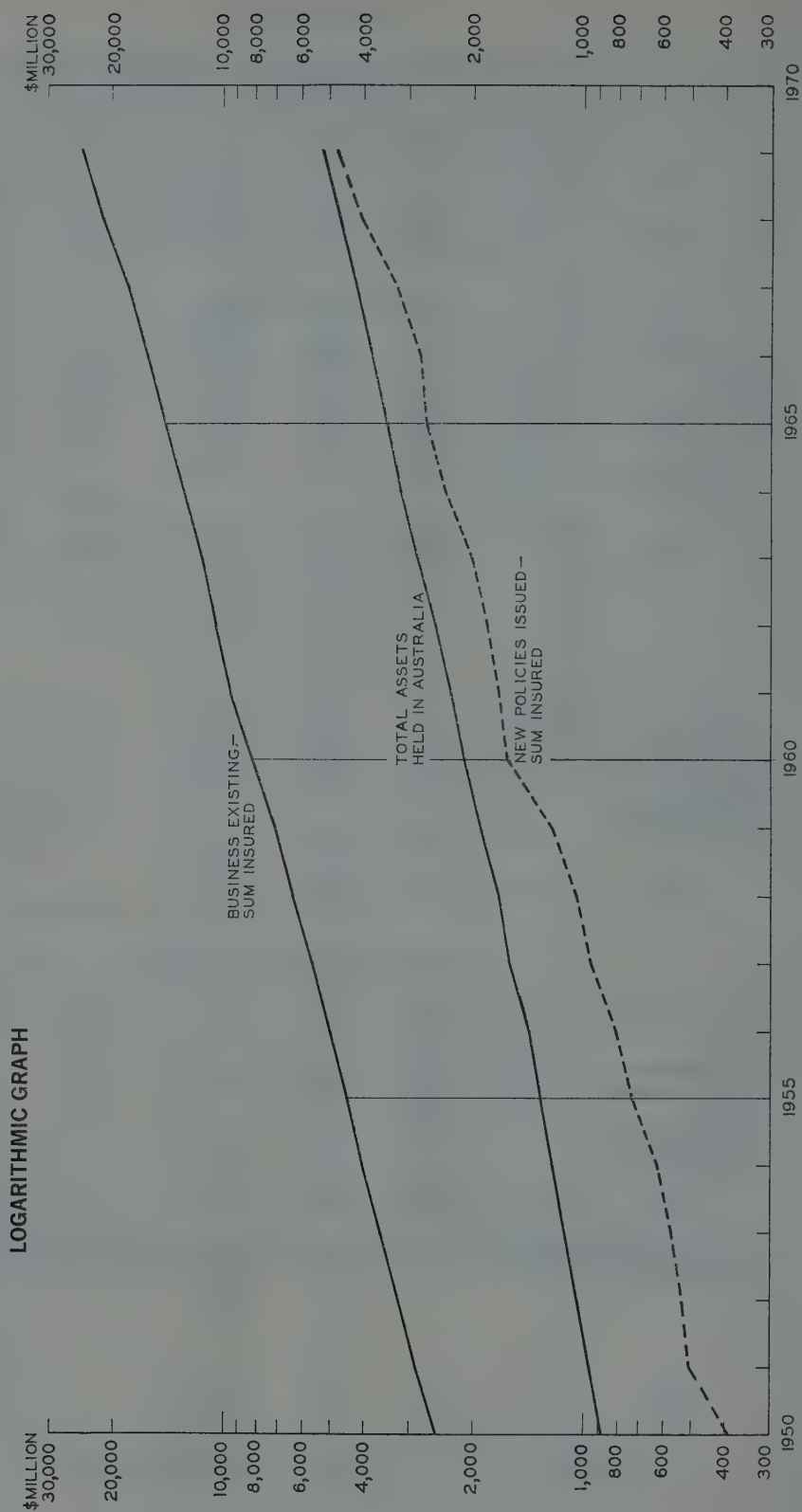


PLATE 32

**LIFE INSURANCE: POLICIES DISCONTINUED OR REDUCED IN AUSTRALIA  
BY CAUSE OF DISCONTINUANCE OR REDUCTION, 1965 TO 1969(a)(b)**

Year	Events provided for in policy							Total
	Death	Maturity	Other (including expiry)	Sur- render	For- feiture	Transfer	Other causes	
ORDINARY BUSINESS								
Number of policies—								
1965(c)	19,857	58,754	2,093	99,413	62,085	—769	—8,311	233,122
1966(c)	20,297	62,970	9,233	97,514	66,096	—781	—4,539	250,789
1967(c)	20,886	68,425	3,127	97,985	62,126	—1,104	—5,306	246,139
1968(c)	22,532	70,339	2,903	104,415	60,504	—1,967	—87	258,639
1969	21,957	69,445	3,577	107,713	55,885	—2,385	—7,286	248,906
Sum insured (\$'000)—								
1965(c)	33,962	35,680	57,038	275,498	236,586	—2,837	—56,267	579,660
1966(c)	37,241	40,093	64,377	242,970	277,012	—2,367	—7,961	651,365
1967(c)	39,817	49,248	83,020	272,396	273,629	—4,474	—4,235	709,402
1968(c)	46,144	52,568	92,477	309,793	315,594	—6,543	—10,340	799,694
1969	48,298	55,046	165,033	425,186	291,956	—9,737	—1,503	974,278
INDUSTRIAL BUSINESS								
Number of policies—								
1965(c)	12,580	117,056	2,276	62,650	31,570	33	—85	226,080
1966(c)	12,417	135,249	1,045	63,121	31,821	105	1	243,759
1967(c)	12,368	67,134	3,806	62,421	31,602	63	—175	177,219
1968(c)	12,689	58,945	7,370	61,374	34,460	—255	—7	174,576
1969	11,947	67,716	..	55,481	34,861	—133	21	169,893
Sum insured (\$'000)—								
1965(c)	2,331	14,628	384	24,222	31,086	12	—43	72,618
1966(c)	2,474	17,616	179	27,646	34,730	72	4	82,720
1967(c)	2,601	9,237	744	27,537	37,527	45	—5	77,688
1968(c)	2,843	8,640	1,524	31,937	41,457	—96	9	86,314
1969	2,800	10,760	..	32,307	45,247	—22	1	91,095
SUPERANNUATION BUSINESS								
Number of policies—								
1965(c)	2,934	7,743	136	35,231	1,853	—5	12,251	60,143
1966(c)	3,255	7,140	615	34,878	1,485	8	19,335	66,716
1967(c)	3,793	7,428	983	38,421	1,542	3	21,150	73,319
1968(c)	3,390	7,806	103	36,881	1,447	—11	17,722	67,338
1969	3,881	8,381	185	48,870	1,471	9	51,867	114,664
Sum insured (\$'000)—								
1965(c)	11,408	10,106	58,400	222,612	16,427	—28	82,977	401,902
1966(c)	13,208	10,544	30,506	232,595	14,597	—19	100,164	401,595
1967(c)	15,256	14,189	29,425	258,790	18,517	38	98,513	434,727
1968(c)	16,659	17,330	44,596	341,571	22,172	—92	97,566	539,802
1969	19,058	18,639	53,617	430,440	19,024	—31	168,389	709,136

(a) Excludes annuities. (b) See footnote (b) on page 496. (c) Includes life insurance business in Papua and New Guinea.

Minus sign (-) denotes an increase in existing business due to an excess of transfers from overseas registers to Australian registers, or conversions from other classes of business over discontinuances.

**LIFE INSURANCE: REVENUE FROM PREMIUMS, AUSTRALIA, 1965 TO 1969**  
(\$'000)

Year	Ordinary business		Industrial business	Superannuation business		Total, all business combined
	Insurance and endowment premiums	Consideration for annuities	Insurance and endowment premiums	Insurance and endowment premiums	Consideration for annuities	
1965(a)	273,060	726	35,404	106,964	9,007	425,161
1966(a)	298,246	485	36,800	121,654	9,558	466,745
1967(a)	327,258	606	38,564	142,566	9,495	518,489
1968(a)	371,941	1,132	40,716	165,530	9,893	589,212
1969	415,629	1,293	42,968	186,856	9,768	656,514

(a) Includes life insurance business in Papua and New Guinea.

**LIFE INSURANCE: PAYMENTS TO POLICY-HOLDERS, AUSTRALIA**  
1965 TO 1969  
(\$'000)

Year	Claims	Surrenders	Annuities	Cash bonuses	Total
<b>ORDINARY BUSINESS</b>					
1965(a)	91,082	33,347	877	650	125,956
1966(a)	101,449	36,375	898	817	139,538
1967(a)	115,631	40,722	931	851	158,134
1968(a)	128,307	46,235	949	1,280	176,771
1969	139,781	53,526	977	1,338	195,622
<b>INDUSTRIAL BUSINESS</b>					
1965(a)	21,024	5,397	..	..	26,422
1966(a)	24,870	5,798	..	1	30,669
1967(a)	14,517	6,185	..	..	20,702
1968(a)	14,757	6,590	..	1	21,348
1969	15,909	6,614	..	1	22,525
<b>SUPERANNUATION BUSINESS</b>					
1965(a)	24,884	24,218	1,602	857	51,561
1966(a)	27,965	27,269	2,037	899	58,171
1967(a)	34,117	27,649	2,401	1,025	65,193
1968(a)	40,437	33,854	2,694	1,207	78,192
1969	45,333	42,374	3,143	1,003	91,853

(a) Includes life insurance business in Papua and New Guinea.



## LIFE INSURANCE: TOTAL REVENUE, 1965 TO 1969

(\$'000)

Australia and overseas									
Year					Total revenue				
	Insurance and endowment premiums	Consideration for annuities granted	Net interest dividends and rents	All other revenue	Australia (a)	Overseas			
ORDINARY BUSINESS									
1965 . . . . .	385,424	11,662	172,379	18,095	407,905	179,655			
1966 . . . . .	421,072	15,110	193,661	20,705	450,285	200,264			
1967 . . . . .	445,631	10,483	206,809	20,042	493,627	189,342			
1968 . . . . .	491,446	10,794	225,001	43,544	572,737	198,047			
1969 . . . . .	545,681	10,730	250,938	39,431	635,488	211,294			
INDUSTRIAL BUSINESS									
1965 . . . . .	40,264	..	18,612	305	51,776	7,404			
1966 . . . . .	41,789	..	19,818	402	54,436	7,574			
1967 . . . . .	42,999	..	20,500	478	57,146	6,831			
1968 . . . . .	44,915	..	21,995	1,848	62,196	6,561			
1969 . . . . .	47,269	..	23,946	1,202	65,563	6,855			
SUPERANNUATION BUSINESS									
1965 . . . . .	115,352	10,316	41,761	4,405	158,690	13,143			
1966 . . . . .	131,721	11,033	48,219	4,412	179,483	15,904			
1967 . . . . .	151,245	10,674	54,940	3,582	207,083	13,359			
1968 . . . . .	174,697	11,141	63,180	12,706	247,003	14,721			
1969 . . . . .	197,456	11,237	71,974	13,913	278,294	16,284			

(a) Includes life insurance business in Papua and New Guinea.

## LIFE INSURANCE: TOTAL EXPENDITURE, 1965 TO 1969

(\$'000)

<i>Australia and overseas</i>									
<i>Year</i>					<i>Total expenditure</i>				
	<i>Claims and annuities paid</i>	<i>Surrenders</i>	<i>Cash bonuses paid to policy-holders</i>	<i>Commission</i>	<i>Other expenses of management</i>	<i>All other expenditure</i>	<i>Australia (a)</i>	<i>Overseas</i>	
ORDINARY BUSINESS									
1965 . . . .	145,087	47,544	1,160	37,649	42,672	18,620	197,348	95,383	
1966 . . . .	161,708	51,273	1,699	41,134	47,228	19,968	218,721	104,287	
1967 . . . .	172,580	56,485	1,624	44,113	51,258	(b)137,105	240,693	222,472	
1968 . . . .	186,897	62,942	2,088	50,812	55,574	87,503	273,542	172,273	
1969 . . . .	202,122	74,582	2,260	59,152	62,856	29,663	309,235	121,400	
INDUSTRIAL BUSINESS									
1965 . . . .	25,078	6,001	..	5,740	6,809	2,645	39,736	6,536	
1966 . . . .	29,409	6,376	1	6,001	7,056	1,721	43,598	6,965	
1967 . . . .	16,851	6,795	..	6,255	7,211	(b)7,719	34,093	10,741	
1968 . . . .	16,445	7,211	1	6,383	7,224	5,629	35,852	7,042	
1969 . . . .	18,476	7,256	1	6,818	7,797	2,720	38,306	4,762	
SUPERANNUATION BUSINESS									
1965 . . . .	28,945	26,543	932	5,326	9,112	10,846	74,114	7,591	
1966 . . . .	33,116	30,456	985	5,383	11,069	13,086	85,629	8,464	
1967 . . . .	39,255	29,330	1,105	5,888	12,032	(b)25,702	93,401	19,914	
1968 . . . .	46,784	35,767	1,288	6,375	13,689	18,008	114,323	7,588	
1969 . . . .	51,483	45,719	1,088	6,936	14,826	26,830	138,032	8,850	

(a) Includes life insurance business in Papua and New Guinea.  
Sterling devaluation on 18 November 1967.

(b) Includes adjustments which have resulted from

## LIFE INSURANCE: LIABILITIES, AUSTRALIA AND OVERSEAS, 1969

(\$ million)

	<i>Life insurance business</i>	<i>Other classes of business</i>	<i>Total liabilities</i>
Shareholders' capital—			
Authorised . . . . .	..	66.6	66.6
Less un-issued . . . . .	..	37.0	37.0
Subscribed capital . . . . .	..	29.6	29.6
Paid-up—			
In money . . . . .	..	24.0	24.0
Otherwise than in money . . . . .	..	4.8	4.8
Total, paid-up capital . . . . .	..	28.8	28.8
Life insurance statutory funds—			
Ordinary business . . . . .	4,577.2	..	4,577.2
Industrial business . . . . .	437.4	..	437.4
Superannuation business . . . . .	1,239.1	..	1,239.1
Total, statutory funds . . . . .	6,253.7	..	6,253.7
Funds in respect of other classes of business . . . . .	..	31.3	31.3
General reserves . . . . .	66.4	30.9	97.3
Profit and loss account balance . . . . .	..	3.5	3.5
<i>Total, shareholders' capital, insurance   funds and reserves . . . . .</i>	<i>6,320.1</i>	<i>94.6</i>	<i>6,414.6</i>
Other liabilities—			
Deposits . . . . .	50.0	13.5	63.4
Staff provident and superannuation funds . . . . .	2.1	2.2	4.3
Claims admitted or intimated but not paid . . . . .	62.7	24.3	87.0
Premiums paid in advance and in suspense . . . . .	7.0	..	7.0
Sundry creditors . . . . .	43.4	3.7	47.1
Bank overdraft . . . . .	45.1	0.6	45.8
Reserves and provisions for taxation . . . . .	37.1	3.4	40.5
All other liabilities . . . . .	5.2	12.9	18.1
Grand total . . . . .	6,572.8	155.2	6,728.0

## LIFE INSURANCE(a): ASSETS HELD IN AUSTRALIA(b), 1965 TO 1969

(\$ million)

	1965	1966	1967	1968	1969
Freehold and leasehold property . . . . .	320.3	388.2	434.7	501.0	636.6
Government and municipal securities . . . . .	1,107.8	1,253.4	1,395.6	1,536.2	1,665.5
Other investments . . . . .	898.2	958.3	1,073.4	1,241.3	1,408.7
Loans on mortgage . . . . .	920.2	976.2	1,036.8	1,108.9	1,188.3
Loans on companies' policies . . . . .	127.4	141.8	155.1	174.4	195.5
Other loans . . . . .	44.3	43.8	44.2	54.1	57.8
All other assets . . . . .	121.3	137.9	153.0	177.2	201.2
Total . . . . .	3,539.5	3,899.9	4,292.7	4,793.1	5,353.8

(a) Includes other classes of business.

(b) Includes Papua and New Guinea.

**LIFE INSURANCE: ASSETS, AUSTRALIA AND OVERSEAS, 1969**  
(\$ million)

	<i>Australia(a)</i>			<i>Australia and overseas</i>		
	<i>Life insurance business</i>	<i>Other classes of business</i>	<i>Total</i>	<i>Life insurance business</i>	<i>Other classes of business</i>	<i>Total</i>
<b>Fixed assets—</b>						
Freehold and leasehold property, office premises .	625.9	10.7	636.6	757.7	10.7	768.4
Furniture, etc. . . . .	7.4	0.9	8.3	8.9	0.9	9.8
<i>Total, fixed assets</i> . . . . .	<i>633.3</i>	<i>11.6</i>	<i>644.9</i>	<i>766.6</i>	<i>11.6</i>	<i>778.2</i>
<b>Loans—</b>						
On mortgage . . . . .	1,177.7	10.5	1,188.3	1,568.7	10.5	1,579.3
On policies of the company .	195.5	..	195.5	249.8	..	249.8
Other loans . . . . .	52.1	5.7	57.8	54.7	5.7	60.6
<i>Total, loans</i> . . . . .	<i>1,425.3</i>	<i>16.3</i>	<i>1,441.7</i>	<i>1,873.3</i>	<i>16.3</i>	<i>1,889.7</i>
<b>Investments—</b>						
Government securities—						
Australia . . . . .	1,207.9	8.2	1,216.1	1,224.7	8.2	1,232.9
Other . . . . .	5.6	..	5.6	303.1	1.6	304.7
Securities of local and semi-government bodies . . . . .	441.2	2.6	443.8	528.9	2.7	531.6
Other investments . . . . .	1,328.3	80.3	1,408.7	1,669.3	81.0	1,750.4
<i>Total, investments</i> . . . . .	<i>2,983.0</i>	<i>91.2</i>	<i>3,074.2</i>	<i>3,726.0</i>	<i>93.6</i>	<i>3,819.6</i>
Cash on deposit, current account and in hand . . . . .	12.7	12.1	24.8	22.1	12.4	34.6
Other assets(b) . . . . .	147.3	20.8	168.0	184.7	21.3	206.0
<b>Grand total</b> . . . . .	<b>5,201.7</b>	<b>152.1</b>	<b>5,353.8</b>	<b>6,572.8</b>	<b>155.2</b>	<b>6,728.0</b>

(a) Includes Papua and New Guinea.

(b) Includes advances of premiums.

**LIFE INSURANCE COMPANIES: NEW LOANS PAID OVER(a), BY CLASS OF SECURITY AND STATE OR TERRITORY, 1966 TO 1970**  
(\$'000)

	<i>1966(b)</i>	<i>1967(b)</i>	<i>1968(b)</i>	<i>1969</i>	<i>1970</i>
<b>Class of security—</b>					
Mortgage of real estate . .	132,638	136,139	161,651	187,498	156,848
Companies' policies . . . .	32,168	34,520	41,818	48,482	60,920
Other . . . . .	3,032	3,390	6,485	8,049	12,040
<b>State or Territory(c)—</b>					
New South Wales . . . . .	75,309	70,026	91,761	100,726	88,526
Victoria . . . . .	48,896	56,752	58,754	68,576	68,587
Queensland . . . . .	(d)13,513	(d)13,816	(d)18,523	24,672	24,119
South Australia(e) . . . . .	12,096	12,851	14,477	17,492	16,456
Western Australia . . . . .	11,162	15,380	19,157	23,965	22,341
Tasmania . . . . .	4,899	3,768	5,491	6,418	6,081
Australian Capital Territory	1,962	1,457	1,790	2,178	3,698
<b>Totals</b> . . . . .	<b>(d)167,838</b>	<b>(d)174,050</b>	<b>(d)209,953</b>	<b>244,029</b>	<b>229,808</b>

(a) Excludes advances of premiums.

(b) Excludes new loans paid over by the two State Government offices.

(c) State or Territory of location of mortgage, registration of policy or residence of borrower.

(d) Includes Papua and New Guinea.

(e) Includes Northern Territory.

# Fire, marine and general insurance

The following statistics, which are in respect of the Australian business of companies operating in Australia and State Government insurance offices, conform to the following definitions and should be interpreted accordingly.

- (a) *Premiums* represent the full amount receivable in respect of policies issued or renewed in the year, less returns, rebates and bonuses paid or credited to policy-holders during the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts differ from 'earned premium income' appropriate to the year. In recent years, as the volume of premiums receivable has been increasing, the figures shown in the tables are greater than the premiums earned by insurers.
- (b) *Claims* comprise payments made during the year, plus the estimated amount of outstanding claims at the end of the year, less the estimated amount of outstanding claims at the beginning of the year. Salvage and other amounts recoverable have been deducted.
- (c) *Contributions to fire brigades, commission and agents' charges, and expenses of management* are mainly charges paid during the year.
- (d) *Taxation* is mainly payments made during the year, and includes income tax, pay-roll tax, licence fees, stamp duty (where paid by the company), etc. Income tax paid during the year is based on the income of earlier years.

The figures relate to selected items of statistics and are not construable as 'Profit and Loss' statements or 'Revenue Accounts'.

During 1969-70 revenue from premiums amounted to \$895.3 million, and that from net interest on investments, etc. to \$59.3 million, a total of \$954.5 million. Expenditure on claims amounted to \$602.7 million, contributions to fire brigades \$22.4 million, commission and agents' charges \$78.1 million, expenses of management \$148.4 million, and taxation \$25.9 million, a total of \$877.5 million.

## FIRE, MARINE AND GENERAL INSURANCE: PREMIUMS AND CLAIMS, BY PRINCIPAL CLASS OF RISK, AUSTRALIA, 1965-66 TO 1969-70 (\$'000)

<i>Class of risk</i>	1965-66	1966-67	1967-68	1968-69	1969-70
<b>PREMIUMS (LESS RETURNS, REBATES AND BONUSES)</b>					
Fire . . . . .	85,167	91,144	97,985	106,045	115,332
Householders' comprehensive . . . . .	37,233	41,747	47,581	54,619	63,036
Loss of profits . . . . .	8,923	10,543	12,169	13,691	15,206
Hailstone(a) . . . . .	3,639	7,805	4,375	7,455	5,242
Marine . . . . .	24,317	26,473	28,899	34,059	40,317
Motor vehicle—					
Compulsory third party . . . . .	81,319	90,003	97,883	127,593	147,819
Other . . . . .	166,106	183,330	193,975	205,171	226,819
Workers' compensation(b) . . . . .	138,412	144,444	142,964	149,197	164,574
Personal accident . . . . .	19,576	22,908	25,327	28,465	32,080
Burglary . . . . .	8,237	10,058	11,604	13,586	14,995
All other . . . . .	36,707	43,051	51,419	59,713	69,845
<b>Total . . . . .</b>	<b>609,636</b>	<b>671,506</b>	<b>714,180</b>	<b>799,593</b>	<b>895,267</b>
<b>CLAIMS (LESS AMOUNTS RECOVERABLE)</b>					
Fire . . . . .	32,650	36,623	44,119	48,769	54,498
Householders' comprehensive . . . . .	10,286	13,629	15,260	19,871	21,159
Loss of profits . . . . .	3,154	2,948	3,840	5,397	4,488
Hailstone(a) . . . . .	3,464	6,113	2,453	2,531	5,635
Marine . . . . .	14,775	14,715	16,712	21,323	23,008
Motor vehicle—					
Compulsory third party . . . . .	78,440	94,883	110,043	118,585	150,728
Other . . . . .	118,292	124,581	133,709	148,810	172,031
Workers' compensation(b) . . . . .	90,544	95,839	100,381	106,618	117,435
Personal accident . . . . .	9,445	10,343	10,423	11,757	13,376
Burglary . . . . .	6,486	7,885	7,187	7,460	8,121
All other . . . . .	18,676	22,903	25,689	27,400	32,244
<b>Total . . . . .</b>	<b>386,211</b>	<b>430,462</b>	<b>469,815</b>	<b>518,521</b>	<b>602,724</b>

(a) Hailstone insurance in Tasmania not separately available after 1965-66. (b) Excludes workers' compensation insurance in coal-mining industry in New South Wales.



### Export Payments Insurance Corporation

The Export Payments Insurance Corporation was established under the *Export Payments Insurance Corporation Act 1956* to provide exporters with insurance against risks associated with overseas trade which are not usually acceptable to commercial insurers, and to give certain guarantees in connection with that trade. The Corporation commenced business in 1957. Where the Corporation is not in a position to accept business on its commercial account it may be authorised under its statute to provide insurance facilities on the Commonwealth Government's account in the national interest.

#### EXPORT PAYMENTS INSURANCE CORPORATION: BUSINESS, 1965-66 TO 1969-70

		1965-66	1966-67	1967-68	1968-69	1969-70
<b>Commercial business—</b>						
Policies and guarantees . . . . .	No.	559	613	692	746	809
Face value of policies current . . . . .	\$'000	180,700	238,271	271,076	298,829	343,064
Maximum contingent liability . . . . .	"	93,801	123,589	141,108	158,966	190,067
Premium income . . . . .	"	463	598	651	730	861
Operating costs . . . . .	"	259	348	388	426	516
Claims paid (gross) . . . . .	"	325	446	854	388	353
Recoveries . . . . .	"	83	111	591	263	212
Underwriting reserve . . . . .	"	955	1,126	1,420	1,897	2,401
<b>National interest and warehousing business—</b>						
Policy holders . . . . .	No.	4	4	3	1	2
Face value of policies current . . . . .	\$'000	2,661	1,932	2,247	1,208	2,420
Maximum contingent liability . . . . .	"	2,206	1,742	1,978	1,087	2,183
<b>Overseas investment insurance—</b>						
Policies . . . . .	No.	..	15	29	41	56
Face value of policies . . . . .	\$'000	..	4,699	12,097	19,813	19,505
Maximum contingent liability . . . . .	"	..	4,229	10,887	17,832	17,555

### PENSION AND SUPERANNUATION SCHEMES

#### Government, local government and semi-government pension and superannuation schemes

The Commonwealth and all State Governments have established pension and superannuation schemes for their employees. These schemes are operated through funds to which both the Governments and their employees make contributions. Employees of local government and semi-government authorities are covered either by the Commonwealth and State Government schemes or by a separate scheme of the authority which is operated either through a separately constituted fund or through a life insurance office.

## Schemes operated through separately constituted funds

GOVERNMENT, LOCAL GOVERNMENT AND SEMI-GOVERNMENT PENSION AND  
SUPERANNUATION SCHEMES OPERATED THROUGH SEPARATELY  
CONSTITUTED FUNDS, 1968-69

	<i>Cwth</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Income—								
Contributions—								
Employees . . . . .	50,471	25,425	23,758	4,708	4,165	3,603	1,985	114,116
Employing authorities . . . . .	46,678	48,034	24,187	6,829	4,449	4,453	2,170	136,801
Interest, dividends and rent . . . . .	25,813	27,701	17,375	4,106	3,368	2,238	1,452	82,052
Other income . . . . .	145	2,089	1,426	16	6,326	59	76	10,138
<i>Total income</i> . . . . .	<i>123,107</i>	<i>103,249</i>	<i>66,746</i>	<i>15,659</i>	<i>18,308</i>	<i>10,354</i>	<i>5,683</i>	<i>343,106</i>
Expenditure—								
Pensions . . . . .	50,058	39,027	23,893	3,901	6,440	4,840	2,534	130,693
Lump sum payments—								
On retirement . . . . .	5,451	4,296	8,468	298	277	547	273	19,610
On resignation(a) . . . . .	6,900	7,648	3,552	706	522	403	445	20,175
Gratuities . . . . .	2,564	832	50					3,446
Other expenditure . . . . .	27	4,359	4,749	19	6,184	95	25	15,459
<i>Total expenditure</i> . . . . .	<i>65,000</i>	<i>56,161</i>	<i>40,712</i>	<i>4,925</i>	<i>13,423</i>	<i>5,885</i>	<i>3,277</i>	<i>189,384</i>
Assets at end of year—								
Cash—								
Deposits with Treasury . . . . .	381	95	97	42,750	522	314		44,159
Other deposits and cash . . . . .	3,967	3,127	2,377	302	219	706	329	11,028
Commonwealth Government securities . . . . .	107,268	2,015	13,149		13,531	106	6,288	142,357
Local and semi-government securities . . . . .	281,017	315,496	211,220	40,244	26,119	33,389	13,335	920,821
Mortgages—								
Housing . . . . .		363	1,423		25,010	760	6,518	34,073
Other . . . . .	85,820	40,326	3,340			306	285	130,077
Loans to building societies . . . . .	166	30,345	999	1,127		440		33,076
Company shares, debentures and notes . . . . .	864	92,416	12,962		42	1,127	35	107,446
Other assets . . . . .	7,757	17,011	(b)79,204	27	836	5,377	450	110,663
<i>Total assets</i> . . . . .	<i>487,241</i>	<i>501,194</i>	<i>324,770</i>	<i>84,451</i>	<i>(c)66,279</i>	<i>42,525</i>	<i>27,241</i>	<i>1,533,700</i>
Less Sundry creditors, etc. . . . .	868	16,287	1,284	139	17	216	199	19,010
<i>Accumulated funds</i> . . . . .	<i>486,373</i>	<i>484,907</i>	<i>323,486</i>	<i>84,312</i>	<i>(c)66,261</i>	<i>42,309</i>	<i>27,041</i>	<i>1,514,690</i>
Contributors at end of year—	No.	No.	No.	No.	No.	No.	No.	No.
Males . . . . .	225,230	134,365	95,677	21,568	24,021	19,330	9,861	564,658
Females . . . . .		20,491		7,538	3,109		3,468	
Pensioners at end of year—								
Ex-employees—								
Males . . . . .	18,636	21,205	10,993	1,767	3,268	3,086	1,141	60,096
Females . . . . .	1,559	2,946	1,936	579	688	456	400	8,564
Widows . . . . .	10,569	4,325	8,827	722	2,863	2,327	974	30,607
Children . . . . .	3,439	830	1,354	231	235	220	185	6,494

(a) Includes refunds of contributions to continuing members. (b) Includes loans to employing authorities. (c) Includes assets of the Voluntary Savings Scheme of the State Superannuation Fund valued at \$6,042,242 on 30 June 1969.

## Schemes operated through life insurance offices

LOCAL GOVERNMENT AND SEMI-GOVERNMENT PENSION AND  
SUPERANNUATION SCHEMES OPERATED THROUGH  
LIFE INSURANCE OFFICES 1964-65 TO 1968-69

	1964-65	1965-66	1966-67	1967-68	1968-69
Income—					
Contributions—					
Employees . . . . .	\$'000	5,250	6,025	7,042	7,534
Employing authorities . . . . .	\$'000	6,417	7,438	8,630	9,481
Contributors at end of year . . . . .	No.	58,590	61,228	69,594	72,381
					75,255

# Parliamentary pension and superannuation schemes

Pension and superannuation schemes have been established for members of the Commonwealth and State Parliaments. All the schemes are operated through funds to which the members of Parliament and the Commonwealth or State Governments contribute.

## PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES, 1968-69

	<i>Cwlth(a)</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Income—								
Contributions—								
Members . . . . .	199	76	90	48	27	51	39	530
Government . . . . .	308	67	86	60	67	56	3	648
Interest and other income . . . . .	112	38	32	76	35	31	2	326
<i>Total income . . . . .</i>	<i>619</i>	<i>182</i>	<i>209</i>	<i>183</i>	<i>128</i>	<i>138</i>	<i>43</i>	<i>1,503</i>
Expenditure—								
Pension payments . . . . .	403	146	198	68	70	93	68	1,046
Other . . . . .	34	..	14	2	..	6	11	68
<i>Total expenditure . . . . .</i>	<i>437</i>	<i>146</i>	<i>211</i>	<i>71</i>	<i>70</i>	<i>100</i>	<i>79</i>	<i>1,114</i>
Assets at end of year—								
Cash—								
Deposits with Treasury . . . . .	42	55	..	8	7	11	..	124
Other deposits and cash . . . . .	..	..	3	..	..	..	7	10
Commonwealth Government securities . . . . .	546	93	..	..	213	45	4	901
Local government and semi-government securities . . . . .	1,262	596	200	830	438	541	4	3,872
Other assets . . . . .	..	68	225	559	11	8	..	871
<i>Total assets . . . . .</i>	<i>1,851</i>	<i>813</i>	<i>428</i>	<i>1,397</i>	<i>669</i>	<i>606</i>	<i>14</i>	<i>5,779</i>
<i>Less Sundry creditors, etc. . . . .</i>	<i>..</i>	<i>13</i>	<i>..</i>	<i>3</i>	<i>..</i>	<i>6</i>	<i>3</i>	<i>25</i>
<i>Accumulated funds . . . . .</i>	<i>1,851</i>	<i>800</i>	<i>428</i>	<i>1,394</i>	<i>669</i>	<i>600</i>	<i>11</i>	<i>5,754</i>
	No.	No.	No.	No.	No.	No.	No.	No.
Contributors at end of year—								
Males . . . . .	180	96	107	76	56	80	53	648
Females . . . . .	4	..	1	1	3	1	1	11
Pensioners at end of year—								
Ex-members . . . . .	86	42	38	38	15	29	21	269
Widows . . . . .	(b)54	31	41	18	21	26	11	(b)202

(a) Includes the Ministerial Retiring Allowances Fund.  
mentary pensions.

(b) Includes children in receipt of Commonwealth Parlia-

### Coal and oil-shale mine workers' superannuation schemes

In all States except South Australia superannuation schemes have been established for coal and oil-shale mine workers. These schemes are operated through funds to which mine workers, mine owners and the State Governments contribute.

#### COAL AND OIL-SHALE MINE WORKERS' SUPERANNUATION SCHEMES<sup>(a)</sup> 1964-65 TO 1968-69

	1964-65	1965-66	1966-67	1967-68	1968-69
	\$'000	\$'000	\$'000	\$'000	\$'000
Income—					
Contributions . . . .	4,974	5,448	5,522	5,671	5,959
Interest, dividends, rent . .	976	1,011	1,091	1,177	1,273
<i>Total income</i> . . . .	<i>5,950</i>	<i>6,458</i>	<i>6,613</i>	<i>6,848</i>	<i>7,231</i>
Expenditure—					
Pensions and lump sum payments . . . .	5,221	5,259	5,348	5,471	5,289
Other . . . . .	131	126	141	149	170
<i>Total expenditure</i> . . . .	<i>5,352</i>	<i>5,385</i>	<i>5,489</i>	<i>5,620</i>	<i>5,458</i>
Assets at end of year—					
Local government and semi-government securities . .	18,146	19,064	20,051	21,530	22,943
Other assets . . . . .	988	1,130	1,282	1,084	1,285
<i>Total assets</i> . . . . .	<i>19,133</i>	<i>20,195</i>	<i>21,333</i>	<i>22,613</i>	<i>24,228</i>
Less Sundry creditors, statutory reserve funds, etc. .	164	152	166	218	59
<i>Accumulated Funds</i> . . . .	<i>18,969</i>	<i>20,042</i>	<i>21,167</i>	<i>22,395</i>	<i>24,168</i>
	No.	No.	No.	No.	No.
Number of contributors at end of year . . . . .	15,344	15,771	15,794	16,116	16,404
Number of pensioners at end of year . . . . .	11,156	11,879	11,852	11,884	11,505

(a) Operating in all States except South Australia.

### Private superannuation, pension and retiring allowance schemes

In 1955-56, 1960-61, 1961-62, and 1962-63 sample surveys were conducted of pension and retiring allowance schemes in private businesses subject to pay-roll tax, other than in rural industries, private domestic service, and certain businesses such as accountants, trade associations, consultant engineers, etc. Commonwealth Government airlines and banks were included where they had established their own funds separately from the Commonwealth superannuation funds, but statutory coal miners' pension funds were excluded. Details were asked for three types of pension and retiring allowance schemes. They were (a) schemes operated through life insurance offices, (b) schemes operated through separately constituted funds, and (c) direct payments of pensions and retiring allowances.



The results of the 1955-56 survey are available in *Finance Bulletin No. 47, Part I—Public and Private Finance*, and the 1960-61, 1961-62 and 1962-63 survey results were published in *Insurance and Other Private Finance*, Bulletin No. 2 and Year Book No 51 (pages 898-900.)

For the years 1956-57 to 1958-59, 1963-64 and 1964-65, information was collected from a small number of the larger separately constituted funds. Although only a small number of funds was included in these collections they accounted, in 1962-63, for about 27 per cent of the income, 28 per cent of the expenditure and about 34 per cent of the total assets of the separately constituted funds covered by the more comprehensive sample survey conducted for 1962-63.

Information for these selected funds for the years 1955-56, 1960-61, 1961-62 and 1962-63 was extracted from the returns obtained in the sample surveys conducted for those years and results of the survey for 1964-65, together with comparative figures for previous years, were published in April 1966 in a mimeographed bulletin.

In order to improve the coverage of the published statistics of private pension funds, returns were collected from some additional funds for 1964-65 and tabulated with the returns from the survey for 1964-65 referred to above. The separately constituted private pension funds included in the enlarged 1964-65 survey together accounted, in 1962-63, for about 72 per cent of the total contributions, 71 per cent of the income, 68 per cent of the expenditure and 77 per cent of the assets of the separately constituted funds covered by the more comprehensive sample survey conducted for 1962-63. The results of the enlarged 1964-65 survey were published in September 1966 in a mimeographed bulletin.

Further surveys, relating to the same funds that were included in the enlarged 1964-65 survey of selected private pension funds, have been made in respect of each year from 1965-66 to 1969-70 inclusive. Since the *Survey of Selected Private Pension Funds* for 1969-70 is not a representative sample, it is not known to what extent their share of the whole field has changed since the 1962-63 survey; nor is the pattern of income, expenditure and asset distribution of the large funds included in this survey necessarily representative of the whole field.

The statistics do not relate to uniform accounting periods but to the financial years of the funds which ended in the years shown.

**SELECTED SEPARATELY CONSTITUTED PRIVATE PENSION FUNDS: INCOME  
AND EXPENDITURE, 1965-66 TO 1969-70**  
(\$ million)

INCOME								
Year(a)	Employees' contributions	Employers' contributions	Interest on local and semi-government securities	Other interest, dividends and rent	Profit from sale or revaluation of assets	Other income(b)	Total income	
1965-66	23.3	42.6	15.8	25.2	1.4	4.1	112.4	
1966-67	26.6	47.7	19.0	27.0	7.6	5.1	133.0	
1967-68	29.4	52.7	20.3	30.8	16.1	6.2	155.6	
1968-69	32.3	58.1	21.9	36.0	18.7	7.0	174.1	
1969-70	36.2	68.1	23.6	41.5	5.0	3.4	177.8	

EXPENDITURE									
Lump sum payments									
To former employees									
Pensions paid			On resignation or dismissal			To widows or children		Loss on sale or revaluation of assets	Other expenditure (c)
Year(a)	Ex-employees	Widows or children	Total	On retirement	Total	Total	Total		
1965-66	12.0	2.1	14.1	8.4	9.4	2.3	20.1	2.2	4.1
1966-67	13.6	2.2	15.8	10.3	9.7	2.6	22.6	0.9	7.6
1967-68	15.4	2.6	18.0	13.0	10.7	2.9	26.6	1.1	3.4
1968-69	17.0	3.1	20.1	14.7	12.7	3.4	30.8	1.6	3.4
1969-70	18.8	3.6	22.4	18.1	15.9	3.0	37.0	3.8	8.0

(a) Years ended 30 June or substituted accounting period. (b) Includes receipts from life insurance offices, sub-underwriting commissions, etc. (c) Includes administrative expenses payable from funds, payments to life insurance offices, etc.

**SELECTED SEPARATELY CONSTITUTED PRIVATE PENSION FUNDS: ASSETS(a)**  
**1965-66 TO 1969-70**

Year	Cash in hand or in bank	Cwlth Govt securi- ties	Local and semi- govern- ment securi- ties	Loans on mortgage		Com- pany debentures, notes, and other loans to com- panies	Shares in com- panies	Land and build- ings	All other assets (b)	Total assets	Less sundry credi- tors, etc.	Amount of funds in Aus- tralia
				To com- panies	Other							
AMOUNT (\$ million)												
1965-66 .	17.5	126.0	185.3	30.3	20.8	188.6	198.1	5.0	11.9	783.4	4.1	779.4
1966-67 .	19.4	137.3	188.9	42.1	22.0	209.4	228.7	6.8	14.9	869.5	4.3	865.1
1967-68 .	22.2	155.2	195.0	56.2	26.5	230.0	258.0	8.2	21.6	972.9	4.7	968.2
1968-69 .	23.9	171.3	202.1	70.7	31.1	256.8	299.7	11.4	20.6	1,087.5	6.8	1,080.7
1969-70 .	18.0	190.0	205.6	85.9	37.0	277.5	337.4	16.3	27.1	1,194.7	8.9	1,185.8
PERCENTAGE DISTRIBUTION												
1965-66 .	2.2	16.1	23.7	3.9	2.7	24.1	25.3	0.6	1.5	100.0	0.5	99.5
1966-67 .	2.2	15.8	21.7	4.8	2.5	24.1	26.3	0.8	1.7	100.0	0.5	99.5
1967-68 .	2.3	15.9	20.0	5.8	2.7	23.6	26.5	1.0	2.2	100.0	0.5	99.5
1968-69 .	2.2	15.8	18.6	6.5	2.9	23.6	27.5	1.0	1.9	100.0	0.6	99.4
1969-70 .	1.5	15.9	17.2	7.1	3.1	23.2	28.3	1.4	2.3	100.0	0.8	99.2

(a) Book values at balance dates.  
to building societies.

(b) Includes loans to authorised dealers in the short-term money market and loans

## FINANCE COMPANIES

Information relating to the lending operations of finance companies in Australia is given in the following tables. A comprehensive account of the scope of these statistics and fuller details of the transactions of finance companies, together with definitions of the various categories of finance agreements and of the items of data given in the tables, are provided in the bulletin *Finance Companies*, 1970 and in the monthly statements *Finance Companies*. For the purpose of these statistics, finance companies are defined as companies which are engaged mainly in providing to the general public (businesses as well as persons in their private capacity) credit facilities of the following types: hire purchase and other instalment credit for retail sales, wholesale hire purchase, other consumer and commercial loans, and factoring. The finance companies covered in these statistics, insofar as they provide instalment credit for retail sales, are also *included* in the statistics of Instalment Credit for Retail Sales (see pages 513-5).

In general, companies which are engaged both in financing activities and other activities come within the scope of these statistics, provided that the major portion of their assets consists of financial assets of the types listed above and/or a major proportion of their income is derived from such assets. Companies are excluded if the major proportion of their balances outstanding consists of agreements written for the purpose of financing their own sales. Companies which are engaged mainly in financing, in any way, the operations of related companies ('related' as defined in the Companies Act) are also *excluded* from these statistics, as are unincorporated finance companies. Also *excluded* are the following classes of financial and quasi-financial institutions: banks; life insurance companies; fire, marine, and general insurance companies; short-term money market dealers; pastoral finance companies; investment companies; unit trusts; land trusts; mutual funds and management companies for the foregoing trusts and funds; pension and superannuation funds; building and friendly societies; credit unions.

## FINANCE COMPANIES: SUMMARY, AUSTRALIA, 1965-66 TO 1969-70

(\$ million)

Year	Amount financed	Collections and other liquidations		All contracts	Balances outstanding at end of period		
		Contracts including charges	Contracts excluding charges		Contracts including charges	Contracts excluding charges	All contracts (a)
1965-66	1,916.2	1,062.1	1,065.9	2,128.1	1,471.4	438.7	1,910.1
1966-67	2,302.1	1,163.6	1,359.4	2,523.1	1,630.0	478.5	2,108.5
1967-68	2,724.0	1,250.1	1,549.5	2,799.6	1,850.2	587.7	2,437.9
1968-69	3,239.4	1,418.3	1,912.6	3,330.9	2,105.5	711.7	2,817.2
1969-70	3,805.7	1,612.7	2,206.2	3,818.9	2,401.0	973.2	3,374.3

(a) Amounts shown in this column are intended to provide a broad overall measure of total balances outstanding. However, movements in this series may be affected by changes in the proportions of the two components of the series to the total.

## FINANCE COMPANIES: AMOUNT FINANCED, BY TYPE OF AGREEMENT AUSTRALIA, 1965-66 TO 1969-70

(\$ million)

Year	Other consumer and commercial loans							
	Commercial loans							Total
	Instalment credit for retail sales	Wholesale hire purchase	Personal loans	Mortgage loans	Call or within 90 days	Other commercial loans	Factoring	
1965-66	612.7	488.2	70.6	222.6	288.4	153.1	80.7	1,916.2
1966-67	689.2	719.0	95.5	280.4	323.1	127.0	68.0	2,302.1
1967-68	816.1	855.8	116.9	342.0	386.6	132.2	74.9	2,724.0
1968-69	922.7	944.4	124.2	449.5	534.2	188.6	75.7	3,239.4
1969-70	1,037.0	1,059.7	145.2	565.6	636.4	270.1	91.8	3,805.7

## FINANCE COMPANIES: COLLECTIONS AND OTHER LIQUIDATIONS OF BALANCES, BY TYPE OF AGREEMENT, AUSTRALIA, 1965-66 TO 1969-70

(\$ million)

Year	Contracts including charges			Contracts excluding charges					All contracts
	Instalment credit for retail sales	Other consumer and commercial loans	Total	Wholesale hire purchase	Other consumer and commercial loans			Total	
					Call or within 90 days	Other	Factoring		
1965-66	778.9	283.2	1,062.1	474.9	271.9	223.6	95.5	1,065.9	2,128.1
1966-67	854.9	308.7	1,163.6	704.6	340.9	237.8	76.2	1,359.4	2,523.1
1967-68	913.0	337.1	1,250.1	836.6	363.6	265.9	83.3	1,549.5	2,799.6
1968-69	1,026.5	391.8	1,418.3	934.8	537.1	352.9	87.9	1,912.6	3,330.9
1969-70	1,150.7	462.0	1,612.7	1,052.9	603.9	445.7	103.7	2,206.2	3,818.9

## FINANCE COMPANIES: BALANCES OUTSTANDING, BY TYPE OF AGREEMENT AUSTRALIA, 1965-66 TO 1969-70

(\$ million)

End of year	Contracts including charges			Contracts excluding charges					All contracts (a)
	Instalment credit for retail sales	Other consumer and commercial loans	Total	Other consumer and commercial loans					
				Wholesale hire purchase	Call or within 90 days	Other	Factoring	Total	
1965-66	990.1	481.3	1,471.4	78.4	65.1	273.4	21.8	438.7	1,910.1
1966-67	1,087.4	542.6	1,630.0	100.8	49.3	306.6	21.7	478.5	2,108.5
1967-68	1,222.0	628.2	1,850.2	127.6	69.9	366.6	23.6	587.7	2,437.9
1968-69	1,380.2	725.2	2,105.5	146.7	62.9	479.5	22.6	711.7	2,817.2
1969-70	1,565.1	835.9	2,401.0	167.4	92.5	686.4	26.9	973.2	3,374.3

(a) Amounts shown in this column are intended to provide a broad overall measure of total balances outstanding. However, movements in this series may be affected by changes in the proportions of the components of the series to the total.

**FINANCE COMPANIES: LOANS TO RELATED  
NON-FINANCE COMPANIES, BALANCES OUT-  
STANDING, AUSTRALIA, 1965-66 TO 1969-70**  
(\$ million)

<i>End of year—</i>	<i>Balances outstanding</i>
1965-66 . . . . .	14.4
1966-67 . . . . .	14.6
1967-68 . . . . .	19.0
1968-69 . . . . .	19.6
1969-70 . . . . .	23.7

**FINANCE COMPANIES: TRANSACTIONS IN BILLS OF EXCHANGE  
AUSTRALIA, 1966-67 TO 1969-70**  
(\$ million)

<i>Year</i>	<i>Amounts paid for bills acquired during period</i>	<i>Amounts received for bills disposed of during period</i>	<i>Balances outstanding at end of period</i>
1966-67 . . . . .	38.7	36.9	4.3
1967-68 . . . . .	111.1	99.1	16.6
1968-69 . . . . .	122.4	122.4	17.8
1969-70 . . . . .	169.2	154.5	33.4

**FINANCE COMPANIES: BUSINESS EQUIPMENT  
AND PLANT ON LEASE, INITIAL CAPITAL COST  
AND BALANCES OUTSTANDING, AUSTRALIA  
1965-66 TO 1969-70**  
(\$ million)

<i>Year</i>	<i>Initial capital cost of goods newly leased during period</i>	<i>Balances outstanding at end of period</i>
1965-66 . . . . .	(a)	89.4
1966-67 . . . . .	77.6	128.6
1967-68 . . . . .	125.3	190.5
1968-69 . . . . .	148.7	253.3
1969-70 . . . . .	206.2	342.7

(a) Not available.

**FINANCE COMPANIES: INSTALMENT CREDIT FOR RETAIL SALES  
AMOUNT FINANCED, COLLECTIONS AND OTHER LIQUIDATIONS, AND BALANCES  
OUTSTANDING, AUSTRALIA, 1965-66 TO 1969-70**  
(\$ million)

<i>Year</i>	<i>Amount financed</i>					<i>Collections and other liquidations</i>		<i>Total</i>	<i>Balances out- standing at end of period</i>
	<i>New motor vehicles</i>	<i>Used motor vehicles</i>	<i>Plant and machinery</i>	<i>House- hold and personal goods</i>	<i>Total</i>	<i>Cash col- lections</i>	<i>Other liquida- tions</i>		
1965-66 . . . . .	249.3	250.1	43.0	70.2	612.7	747.0	32.0	778.9	990.1
1966-67 . . . . .	254.9	262.1	51.3	120.8	689.2	823.4	31.5	854.9	1,087.4
1967-68 . . . . .	318.2	301.9	59.0	136.9	816.1	883.1	29.9	913.0	1,222.0
1968-69 . . . . .	351.9	349.7	78.0	142.6	922.7	988.3	38.2	1,026.5	1,380.2
1969-70 . . . . .	400.5	412.2	80.4	144.2	1,037.0	1,100.4	50.1	1,150.7	1,565.1



# INSTALMENT CREDIT FOR RETAIL SALES

Information relating to instalment credit for retail sales in Australia is given in the following tables. More detailed information may be found in the annual bulletin *Insurance and Other Private Finance* and in the monthly and quarterly statements relating to instalment credit for retail sales issued by this Bureau (*see* beginning of chapter).

The statistics cover operations of all types of instalment credit schemes which relate primarily to the financing of retail sales of goods, whether the credit is advanced by a retail business or by a non-retail finance business. In general, the term 'instalment credit' is defined as relating to schemes in which repayment is made by regular pre-determined instalments. Types of schemes covered include hire purchase, time payment, budget account, and personal loan schemes which relate primarily to the financing of retail sales of goods. In these statistics the term 'retail sales' relates not only to retail sales by retail establishments coming within the scope of the Censuses of Retail Establishments conducted periodically by this Bureau, but includes also other sales of goods to final purchasers (e.g. plant and machinery).

Figures for amounts financed *exclude* interest, hiring charges, insurance, etc. Figures for balances outstanding and collections *include* interest, hiring charges, insurance, etc. Details are not available of these charges or of other items (e.g. rebates allowed for early payments, late payment charges, bad debts written off) which affect the reconciliation of the three main instalment credit series—amount financed, collections, and balances outstanding.

Statistics of amounts financed are classified by type of goods, defined as follows: *motor vehicles* (new and used separately)—motor cars and motor cycles, commercial vehicles, tractors, caravans, trailers, motor parts and accessories, etc.; *plant and machinery*—farm machinery and implements, earth-moving equipment, aircraft, industrial plant and machinery, business machines and equipment (including commercial refrigeration equipment), etc.; *household and personal goods*—furniture, furnishings and floor coverings, domestic refrigerators, electrical goods, radios, television, musical instruments, bicycles, motor mowers, clothing, etc.

## INSTALMENT CREDIT FOR RETAIL SALES, BY TYPE OF BUSINESS: AMOUNT FINANCED, BY COMMODITY GROUP, COLLECTIONS, AND BALANCES OUTSTANDING, AUSTRALIA, 1965-66 TO 1969-70

(\$ million)

Year	Amount financed during year					Collections during year	Balances outstanding at end of year
	Motor vehicles, etc.		Plant and machinery	Household and personal goods	Total		
	New	Used					
Retail businesses—							
1965-66 . . .	9.7	9.5	3.2	259.4	281.8	355.4	360.3
1966-67 . . .	11.3	8.6	3.7	254.0	277.6	338.5	339.2
1967-68 . . .	12.1	8.8	3.4	266.0	290.3	335.7	337.8
1968-69 . . .	13.5	11.5	3.8	273.0	301.8	347.9	344.6
1969-70 . . .	12.2	9.8	2.6	286.3	311.0	359.2	348.9
Non-retail finance businesses—							
1965-66 . . .	271.3	252.3	69.6	83.5	676.8	822.1	1,074.0
1966-67 . . .	274.5	267.6	83.5	84.4	710.0	854.1	1,103.7
1967-68 . . .	339.9	308.2	93.6	87.8	829.4	906.5	1,238.0
1968-69 . . .	373.3	356.8	114.7	88.5	933.3	1,014.3	1,388.6
1969-70 . . .	422.9	420.5	112.7	88.5	1,044.5	1,128.1	1,565.8
All businesses—							
1965-66 . . .	281.0	261.8	72.8	342.9	958.6	1,177.5	1,434.3
1966-67 . . .	285.8	276.1	87.3	338.3	987.5	1,192.6	1,443.0
1967-68 . . .	352.0	317.0	97.0	353.8	1,119.8	1,242.1	1,575.8
1968-69 . . .	386.8	368.3	118.5	361.5	1,235.1	1,362.1	1,733.2
1969-70 . . .	435.1	430.3	115.3	374.8	1,355.5	1,487.3	1,914.7

**INSTALMENT CREDIT FOR RETAIL SALES, BY TYPE OF CREDIT  
AMOUNT FINANCED, BY COMMODITY GROUP, AND  
BALANCES OUTSTANDING, AUSTRALIA, 1965-66 TO 1969-70**  
(\$ million)

Year	Amount financed during year			Total	Balances outstanding at end of year
	Motor vehicles, etc.	Plant and machinery	Household and personal goods		
Hire purchase—					
1965-66 . . .	410.8	67.2	134.3	612.2	1,027.6
1966-67 . . .	405.9	80.1	128.8	614.7	994.1
1967-68 . . .	431.2	84.3	133.9	649.3	1,026.4
1968-69 . . .	463.5	97.4	134.0	695.0	1,078.0
1969-70 . . .	526.1	93.7	135.6	755.4	1,159.3
Other instalment credit—					
1965-66 . . .	132.1	5.6	208.7	346.3	406.7
1966-67 . . .	156.0	7.2	209.6	372.8	448.8
1967-68 . . .	237.8	12.7	219.9	470.4	549.4
1968-69 . . .	291.5	21.1	227.5	540.1	655.2
1969-70 . . .	339.3	21.6	239.3	600.2	755.4
Total instalment credit—					
1965-66 . . .	542.8	72.8	342.9	958.6	1,434.3
1966-67 . . .	561.9	87.3	338.3	987.5	1,443.0
1967-68 . . .	669.0	97.0	353.8	1,119.8	1,575.8
1968-69 . . .	755.1	118.5	361.5	1,235.1	1,733.2
1969-70 . . .	865.4	115.3	374.8	1,355.5	1,914.7

**INSTALMENT CREDIT FOR RETAIL SALES: AMOUNT FINANCED  
BY TYPE OF CREDIT AND COMMODITY GROUP, STATES, 1969-70**  
(\$ million)

Commodity group	N.S.W. (a)	Vic.	Qld	S.A.(b)	W.A.	Tas.	Aust.
Hire purchase—							
Motor vehicles, tractors, etc. .	302.3	69.5	37.6	22.3	73.2	21.2	526.1
Plant and machinery . . .	41.1	22.1	11.6	3.5	11.4	4.0	93.7
Household and personal goods	36.2	45.4	25.7	8.1	15.1	5.1	135.6
<i>Total hire purchase . . .</i>	<i>379.5</i>	<i>137.1</i>	<i>74.9</i>	<i>33.9</i>	<i>99.7</i>	<i>30.3</i>	<i>755.4</i>
Other instalment credit—							
Motor vehicles, tractors, etc. .	16.3	153.6	77.5	69.1	20.1	2.6	339.3
Plant and machinery . . .	1.8	3.4	9.2	1.8	5.2	0.1	21.6
Household and personal goods	121.8	53.0	27.0	22.0	11.0	4.6	239.3
<i>Total other instalment credit</i>	<i>139.9</i>	<i>210.0</i>	<i>113.7</i>	<i>92.9</i>	<i>36.3</i>	<i>7.3</i>	<i>600.2</i>
Total instalment credit—							
Motor vehicles, tractors, etc. .	318.6	223.1	115.1	91.4	93.4	23.7	865.4
Plant and machinery . . .	42.9	25.5	20.8	5.3	16.6	4.2	115.3
Household and personal goods	157.9	98.4	52.7	30.1	26.1	9.6	374.8
<b>Total instalment credit . .</b>	<b>519.4</b>	<b>347.1</b>	<b>188.6</b>	<b>126.9</b>	<b>136.0</b>	<b>37.6</b>	<b>1,355.5</b>

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

NEW HIRE PURCHASE AGREEMENTS: AVERAGE VALUE AND  
AMOUNT AND PROPORTION FINANCED, BY COMMODITY  
GROUP, AUSTRALIA, 1969-70

<i>Commodity group</i>	<i>Average value of goods purchased per agreement</i>	<i>Average amount financed per agreement</i>	<i>Average proportion financed</i>
	\$	\$	Per cent
Motor vehicles, tractors, etc. . . . .	1,985	1,375	69
Plant and machinery . . . . .	3,639	2,526	69
Household and personal goods . . . . .	212	173	82
<b>All groups . . . . .</b>	<b>881</b>	<b>628</b>	<b>71</b>

INSTALMENT CREDIT FOR RETAIL SALES: BALANCES OUTSTANDING  
BY TYPE OF CREDIT, STATES, 30 JUNE 1966 TO 1970  
(\$ million)

<i>30 June—</i>	<i>N.S.W.(a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>Hire purchase—</b>							
1966 . . . . .	452.5	189.2	164.7	84.5	98.7	37.9	1,027.6
1967 . . . . .	446.0	174.7	157.5	75.8	101.1	39.2	994.1
1968 . . . . .	477.8	173.1	147.8	65.6	119.8	42.3	1,026.4
1969 . . . . .	526.3	180.6	137.1	57.4	132.9	43.7	1,078.0
1970 . . . . .	585.8	194.8	131.0	55.1	146.7	46.0	1,159.3
<b>Other instalment credit—</b>							
1966 . . . . .	107.3	155.5	67.0	52.8	16.8	7.2	406.7
1967 . . . . .	116.3	166.7	76.6	57.0	25.6	6.7	448.8
1968 . . . . .	131.2	200.7	105.0	72.4	32.7	7.3	549.4
1969 . . . . .	146.0	237.8	128.8	96.1	38.0	8.5	655.2
1970 . . . . .	155.2	279.5	152.4	118.9	40.7	8.7	755.4
<b>Total instalment credit—</b>							
1966 . . . . .	559.8	344.7	231.7	137.3	115.5	45.1	1,434.3
1967 . . . . .	562.3	341.4	234.1	132.8	126.7	45.8	1,443.0
1968 . . . . .	609.0	373.8	252.8	138.1	152.6	49.6	1,575.8
1969 . . . . .	672.3	418.4	266.0	153.5	170.9	52.2	1,733.2
1970 . . . . .	741.0	474.3	283.3	173.9	187.4	54.7	1,914.7

(a) Includes Australian Capital Territory. (b) Includes Northern Territory.

## PASTORAL FINANCE COMPANIES

PASTORAL FINANCE COMPANIES: RURAL ADVANCES  
AMOUNTS OUTSTANDING(a), JUNE 1966 TO 1970

(Source: Reserve Bank of Australia)

(\$ million)

<i>End of June—</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A. and Tas.</i>	<i>Total</i>
1966 . . .	62.4	40.9	55.6	44.3	46.6	249.9
1967 . . .	68.4	50.2	58.8	50.1	57.9	285.5
1968 . . .	72.2	54.8	63.5	61.0	62.9	314.4
1969 . . .	77.6	65.9	62.6	70.2	61.5	337.7
1970 . . .	76.7	66.1	66.8	71.4	68.2	349.1

(a) Compiled from returns supplied to the Reserve Bank by major pastoral finance companies. Advances are classified according to the location of the branch holding the advance, which in some cases may differ from the State of residence of the borrower.

## PASTORAL FINANCE COMPANIES: LIABILITIES AND ASSETS(a), JUNE 1966 TO 1970

(Source: Reserve Bank of Australia)

(\$ million)

## LIABILITIES

<i>End of June—</i>	<i>Balances due to banks</i>	<i>Clients' credit balances</i>	<i>Debentures, notes and deposits</i>		<i>Other outside liabilities</i>	<i>Share- holders' funds</i>	<i>Overseas liabilities</i>	<i>Total liabili- ties/ assets</i>
			<i>Maturing within twelve months</i>	<i>Other</i>				
1966 . . .	57.3	39.1	27.3	24.1	95.6	145.7	128.4	517.5
1967 . . .	68.5	41.8	39.3	29.8	94.8	154.2	131.9	560.2
1968 . . .	94.4	34.4	51.9	40.0	89.9	162.5	133.2	606.1
1969 . . .	86.7	37.6	52.7	46.5	107.2	173.4	138.4	642.4
1970 . . .	95.1	34.7	70.6	52.1	113.6	181.1	152.5	699.6

## ASSETS

<i>End of June—</i>	<i>Cash and deposits with banks</i>	<i>Loans to author- ised money market dealers</i>	<i>Other short- term assets (b)</i>	<i>Cwlth Govt securi- ties</i>	<i>Advances and sundry debtors</i>		<i>Stocks</i>	<i>Fixed assets</i>	<i>Other assets</i>
					<i>Rural</i>	<i>Other</i>			
1966 . . .	6.3	0.9	4.5	29.0	249.9	28.0	34.9	140.2	23.8
1967 . . .	7.6	0.4	1.9	33.3	285.5	25.7	37.8	145.8	22.3
1968 . . .	8.6	1.7	1.3	35.7	314.4	29.9	40.4	148.4	25.7
1969 . . .	11.1	1.6	6.9	35.7	337.7	29.7	40.4	151.6	27.7
1970 . . .	7.9	1.2	17.5	32.6	349.1	36.9	42.5	176.5	35.3

(a) Compiled from returns supplied to the Reserve Bank by major pastoral finance companies.

(b) Excludes Commonwealth Government securities.



## RURAL DEBT

Major sources of credit for rural purposes include banks, Commonwealth and State government financial agencies, pastoral finance companies, and life insurance companies. The following table shows the estimated rural debt to these lenders.

## ESTIMATED RURAL DEBT TO SPECIFIED LENDERS, 30 JUNE 1966 TO 1970

(Source: Reserve Bank of Australia)

(\$ million)

Lender	30 June—				
	1966	1967	1968	1969	1970
Major trading banks . . .	650	751	918	939	998
Ex-service settlement . . .	99	92	88	83	80
Other government, including State banks and State savings banks .	232	261	297	317	(a)351
Pastoral finance companies . .	250	285	314	338	349
Commonwealth Development Bank	92	120	143	162	176
Life insurance companies . . .	75	81	97	113	128
<b>Total . . . . .</b>	<b>1,398</b>	<b>1,590</b>	<b>1,857</b>	<b>1,952</b>	<b>2,082</b>

(a) Reserve Bank estimate.

In addition, credit is supplied to the rural sector by finance companies, merchants, co-operative producer organisations, and by private lenders and investors, the most noteworthy of these last-mentioned sources involving family arrangements and property vendors. No data are currently available on the extent of the outstanding debt by the rural sector to these sources.

## NEW CAPITAL RAISINGS BY COMPANIES IN AUSTRALIA

Information relating to capital raised by companies in Australia is given in the following tables. More detailed information may be found in the annual bulletin *Insurance and Other Private Finance* and in quarterly bulletins dealing with capital raisings (see beginning of chapter).

The statistics (the collection of which commenced in July 1954) relate to capital raised by companies through issues of shares, and in the case of companies listed on stock exchanges, through the issue of debentures, notes and similar securities and the acceptance of deposits, and in the case of unlisted companies, by way of loans secured over the entire assets of the company. Capital obtained by way of bank overdraft or bank loans, trade credit, temporary advances, and loans secured over part only of the assets of the company is not included. Totally unsecured loans are included in the case of listed companies, but are excluded in the case of unlisted companies.

Separate statistics are given for listed and unlisted companies. Listed companies are companies incorporated in Australia or the Australian territories and listed on one or more of the Australian stock exchanges. All other companies incorporated in Australia, including subsidiaries of listed companies, are classified as unlisted companies. Companies incorporated overseas, whether listed on an Australian stock exchange or not, are excluded from the statistics of share issues. However, subsidiaries of overseas companies, if incorporated in Australia, are included in the statistics of share issues. The statistics of new capital raised through issues of debentures, notes, etc., and the acceptance of deposits, include, in addition to capital raised by companies incorporated in Australia (including subsidiaries of overseas companies), capital raised in this way from Australian sources by overseas public companies through their Australian offices. Where an issue is made at the same time on Australian and overseas markets, that part of the issue which is taken up through overseas brokers is excluded.

The following are explanatory notes relating to some of the items shown in the tables.

**New money.** This is the net amount of cash transferred from the investing public to the companies. For this purpose the 'investing public' includes banks and life insurance companies (except when subscribing to issues by associated companies) and government and private superannuation funds, but excludes other government agencies. Subscriptions by associated companies, whether local or overseas, are excluded. In the tables which follow the amount of new money is obtained by deducting from the total cash raised the 'amount not involving new money'.

*Amount not involving new money.* This amount includes cash subscriptions received by issuing companies from associated companies. Such subscriptions represent inter-company transfers only, and do not involve a receipt of funds from the 'investing public'. Also included are amounts which, although subscribed by the 'investing public' (i.e. subscribers other than 'associated companies'), are not retained by the issuing company or its associates, but are used to redeem shares, debentures or unsecured notes, etc., or are used to purchase from individuals existing shares, debentures etc., in other companies, including existing shares, etc., in associated and subsidiary companies. The funds used in this way are thus returned to another section of the 'investing public' and do not represent a *net* transfer of cash from the 'investing public' to the companies. (Besides these purchases of existing shares, etc., from individuals, purchases of existing shares, etc., from companies other than associates of the issuing company might also be included in this item, but the amounts involved are small and separate details have not been collected.)

**LISTED COMPANIES(a): NEW CAPITAL RAISED THROUGH ISSUES OF SHARES  
DEBENTURES, OR REGISTERED NOTES, ETC.(b), OR ACCEPTING  
DEPOSITS(c), 1965-66 TO 1969-70**  
(\$ million)

Year	Share capital					Debentures, registered notes and deposits				
	Value of issues commenced	Non-cash issues commenced (d)	Cash issues commenced	Cash raised during period (e)	Amount not involving new money	New money	Total amount raised (f)	Amount not involving new money (f)	New money	
1965-66	292.1	85.6	206.3	232.6	61.5	171.3	990.4	840.5	149.9	
1966-67	313.7	148.0	165.8	151.6	39.2	112.4	1,099.3	898.9	200.4	
1967-68	281.0	79.3	201.8	170.1	47.2	122.9	1,393.9	1,045.2	348.7	
1968-69	927.2	209.9	717.3	482.2	143.7	338.5	1,874.3	1,426.1	448.3	
1969-70	1,062.3	281.6	781.0	658.6	207.3	451.3	2,564.7	2,082.0	482.6	

(a) Includes companies incorporated in the Australian Territories. (b) Includes convertible notes. (c) Deposits accepted by banks, life insurance companies, pastoral companies and building societies, and loans to authorised dealers in the short-term money market are not included. (d) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc. (e) Amounts paid up on issues commenced during the year plus calls on issues commenced in earlier years. (f) Includes conversions, renewals, etc.

**UNLISTED COMPANIES(a): NEW CAPITAL RAISED THROUGH ISSUES OF  
SHARES AND LOANS SECURED BY CHARGES OVER THE COMPANIES'  
ENTIRE ASSETS, 1965-66 TO 1969-70**  
(\$ million)

Year	Share capital					Loans secured by charges over the companies' entire assets			
	Value of issues commenced	Non-cash issues commenced (b)	Cash issues commenced	Cash raised during period (c)	Amount not involving new money	New money	Total amount raised (d)	Amount not involving new money (d)	New money
1965-66	455.3	260.1	195.4	216.3	165.5	50.8	63.8	40.7	23.1
1966-67	392.7	178.8	214.0	150.6	110.2	40.4	74.2	37.9	36.4
1967-68	400.1	190.9	209.1	209.2	158.4	50.8	66.5	48.2	18.1
1968-69	718.8	343.8	375.3	299.0	230.5	68.4	95.4	62.8	32.5
1969-70	625.8	271.9	353.9	312.1	235.0	77.1	94.8	75.4	19.6

(a) Includes companies incorporated in the Northern Territory. (b) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc. (c) Amounts paid up on issues commenced during year plus calls on issues commenced in previous years. (d) Includes conversions, renewals, etc.

**LISTED AND UNLISTED COMPANIES: NEW MONEY RAISED, BY INDUSTRY  
GROUP, 1965-66 TO 1969-70**  
(\$ million)

Year	Companies listed on stock exchanges			Companies not listed on stock exchanges			Grand total
	Share capital(a)	Deben- tures registered notes and deposits(b)	Total	Share capital(a)	Secured loans(c)	Total	
Manufacturing—							
1965-66 . . .	94.5	79.9	174.4	13.6	12.8	26.4	200.8
1966-67 . . .	28.3	101.7	130.0	8.8	15.7	24.5	154.5
1967-68 . . .	24.7	82.4	107.1	12.7	7.8	20.5	127.6
1968-69 . . .	92.9	68.3	161.2	14.4	6.3	20.7	181.9
1969-70 . . .	122.0	57.8	179.8	12.4	3.3	15.7	195.5
Finance and property(b)—							
1965-66 . . .	25.3	63.1	88.4	9.4	4.6	14.0	102.4
1966-67 . . .	4.7	94.9	99.6	6.4	7.4	13.8	113.4
1967-68 . . .	15.6	255.4	271.0	8.1	6.2	14.3	285.3
1968-69 . . .	45.9	338.1	384.0	18.9	6.4	25.3	409.3
1969-70 . . .	36.4	366.7	403.1	20.9	10.2	31.1	434.2
Commerce—							
1965-66 . . .	25.0	(d)-4.0	21.0	10.1	1.6	11.7	32.7
1966-67 . . .	32.1	(d)-0.7	31.4	8.5	0.7	9.2	40.6
1967-68 . . .	7.9	4.3	12.2	8.9	0.8	9.7	21.9
1968-69 . . .	18.4	30.7	49.1	10.1	2.3	12.4	61.5
1969-70 . . .	8.9	13.8	22.7	8.2	0.9	9.1	31.8
Other industries—							
1965-66 . . .	26.5	11.0	37.5	14.5	4.1	18.6	56.1
1966-67 . . .	47.2	4.6	51.8	13.7	12.7	26.4	78.2
1967-68 . . .	75.0	6.6	81.6	17.6	3.4	21.0	102.6
1968-69 . . .	181.5	11.2	192.7	21.5	17.3	38.8	231.5
1969-70 . . .	284.0	44.5	328.5	31.2	5.3	36.5	365.0
All industries—							
1965-66 . . .	171.3	149.9	321.2	(e) 50.8	(e) 23.1	(e) 73.9	395.1
1966-67 . . .	112.4	200.4	312.8	40.4	36.4	76.8	389.6
1967-68 . . .	122.9	348.7	471.6	50.8	18.1	68.9	540.5
1968-69 . . .	338.5	448.3	786.8	68.4	32.5	100.9	887.7
1969-70 . . .	451.3	482.6	933.9	77.1	19.6	96.7	1,030.6

(a) Includes preference shares. (b) Excludes deposits accepted by banks, insurance companies, pastoral companies and building societies, and loans to authorised dealers in the short-term money market. (c) Includes only loans which are secured by charges over the companies' entire assets. (d) Excess of repayments over receipts of new money. (e) Small share issues of less than \$2,000 for which returns have not been collected have not been included in the industrial classification but are included in All industries.

### SHORT-TERM MONEY MARKET

For some years prior to 1959 leading stockbrokers had been actively engaged in the acceptance of short-term funds against the security of government securities, but their operations were limited by the absence of suitable short-term securities and their liquidity requirements. In February 1959 the Commonwealth Bank (now the Reserve Bank) gave official status to the market by announcing that under certain conditions it would act as lender of last resort to authorised dealers in the short-term money market.

The form of organisation consists of nine companies whose functions are:

- (i) to accept loans overnight, at call or for fixed periods, in minimum amounts of \$50,000 and to invest these funds in money market securities.
- (ii) to engage as traders in the buying and selling of money market securities.

The types of securities that may be used as money market securities are subject to the approval of the Reserve Bank. At present they comprise Commonwealth Government securities maturing within five years, commercial bills of any maturity that have been accepted or endorsed by a trading bank, banks' certificates of deposit maturing within five years, and non-bank commercial bills maturing within 180 days.

Dealers are required to have a minimum paid up capital of \$400,000 and there is a limit on the maximum ratio of loans to shareholders' funds. Dealers are required to lodge with the Reserve Bank 'margins' in the form of money market securities as general backing for their operations. These 'margins' are minimum proportions, at market values, of a dealer's holdings of money market securities. In April 1969 the Reserve Bank announced that the requirement to lodge 'margins' would be withdrawn from a date to be announced.

Under the lender of last resort arrangements dealers may borrow from the Reserve Bank for a minimum of seven days and at a high rate of interest against the lodgment of Commonwealth Government securities.

#### SHORT-TERM MONEY MARKET: SELECTED LIABILITIES AND ASSETS AND INTEREST RATES OF AUTHORISED DEALERS, JUNE 1966 TO 1970

(Source: Reserve Bank of Australia)

Month	Liabilities to clients			Holdings of Cwlth Govt securities (at face value)	Commercial bills	Banks' certificates of deposit	Interest rates on loans accepted during month				Weighted average interest rate on loans outstanding (a)
	All trading banks	Other clients	Total				At call		For fixed periods		
							Minimum	Maximum	Minimum	Maximum	
							per cent	per cent	per cent	per cent	
							per annum	per annum	per annum	per annum	
Average of weekly figures—(\$ million)											
June—											
1966 .	74.8	275.4	350.2	373.3	25.2	..	3.00	6.10	4.25	5.80	4.73
1967 .	88.8	367.6	456.4	467.7	32.8	..	2.00	6.50	3.00	5.50	4.46
1968 .	87.7	406.5	494.2	491.3	35.7	..	3.00	6.75	3.75	5.40	4.29
1969 .	94.9	398.7	493.6	505.6	28.9	15.0	2.00	7.50	4.00	6.75	4.59
1970 .	102.8	464.2	567.0	575.4	38.3	3.6	3.50	8.80	4.50	8.50	6.12

(a) Average of weekly figures.

#### SHORT-TERM MONEY MARKET: AUTHORISED DEALERS' LIABILITIES BY TYPE OF CLIENT(a), 30 JUNE 1966 TO 1970

(Source: Reserve Bank of Australia)

(\$ million)

Client	30 June—				
	1966	1967	1968	1969	1970
All trading banks . . . . .	91.1	121.5	17.6	90.0	158.4
Savings banks . . . . .	35.6	56.2	26.5	36.0	37.3
Insurance offices . . . . .	12.5	10.8	20.1	32.4	24.4
Superannuation, pension and provident funds . . . . .	6.2	11.7	4.6	8.9	16.6
Hire purchase and other instalment credit companies . . . . .	6.3	5.9	2.8	2.4	7.9
Companies, n.e.i. . . . .	95.1	120.2	156.8	140.3	143.7
Commonwealth and State Governments . . . . .	30.4	57.4	78.1	62.3	47.7
Local government and semi-government authorities, n.e.i. . . . .	51.0	56.5	72.2	75.3	87.7
All other lenders(b) . . . . .	18.4	33.6	20.6	45.9	36.2
<b>Total . . . . .</b>	<b>346.5</b>	<b>473.7</b>	<b>499.3</b>	<b>493.4</b>	<b>559.9</b>

(a) Compiled from returns supplied by authorised dealers in the short-term money market. Liabilities to Reserve Bank as lender of last resort are excluded. (b) Includes marketing boards and trustee companies.



## UNIT TRUSTS, LAND TRUSTS AND MUTUAL FUNDS

Statistics of operations of unit trusts, land trusts and mutual funds for the years 1965-66 to 1969-70 are shown below. Details of superannuation funds conducted by unit trust management companies are not included in these tables.

TRUSTS AND FUNDS: TOTAL MARKET VALUE AND TRANSACTIONS  
YEARS 1965-66 TO 1969-70

(\$ million)

Year	Cash transactions— trust units and fund shares				
	Total market value at end of period(a)	Total amount received(c)	Total amount paid(d)	Purchases and sales of investments(b)	
				Purchases (e)	Sales (f)
1965-66	225.2	25.2	19.7	23.9	20.0
1966-67	224.4	20.2	21.1	20.5	17.7
1967-68	267.5	30.9	35.1	33.0	40.8
1968-69	276.6	41.6	42.0	48.2	54.6
1969-70	293.9	59.0	32.3	61.1	50.8

(a) Includes value of land trusts at valuation. (b) Commonwealth Government, local and semi-government authority securities, shares, debentures, unsecured notes, loans, deposits on term or notice of three months or longer, land and buildings, etc. (c) For trust units and fund shares issued. Includes re-issues and new issues. Includes fees and expenses. (d) For trust units and fund shares repurchased. Includes those units and fund shares intended for re-issue. (e) Payments for assets acquired during period. Includes brokerage and stamp duty. (f) Receipts for assets sold or redeemed during period. Excludes brokerage and stamp duty.

TRUSTS AND FUNDS: ANALYSIS OF PURCHASES AND SALES OF  
INVESTMENTS, 1965-66 TO 1969-70

(\$ million)

<i>Year</i>	<i>Shares (incl. preference shares)</i>	<i>Debentures, unsecured notes, deposits (a)</i>	<i>Cwlth Govt, local and semi-govt authority securities</i>	<i>Other(b)</i>	<i>Total</i>
Purchases—					
1965-66 . . . . .	12.6	3.8	..	7.4	23.9
1966-67 . . . . .	7.6	5.3	..	7.6	20.5
1967-68 . . . . .	13.2	7.3	..	12.5	33.0
1968-69 . . . . .	17.0	11.6	0.1	19.7	48.2
1969-70 . . . . .	35.3	10.6	0.1	15.1	61.1
Sales—					
1965-66 . . . . .	14.1	2.7	0.1	3.1	20.0
1966-67 . . . . .	13.7	3.0	0.1	0.8	17.7
1967-68 . . . . .	34.7	3.8	..	2.3	40.8
1968-69 . . . . .	44.0	5.5	..	5.1	54.6
1969-70 . . . . .	37.9	6.4	0.1	6.5	50.8

(a) Excludes cash on hand and at bank, loans to authorised dealers in the short-term money market, and other deposits under three months' term or notice. (b) Includes land and buildings, mortgages on land and buildings, and other investments.

## REGISTERED BUILDING SOCIETIES

Permanent, Starr-Bowkett and Terminating building societies

## REGISTERED BUILDING SOCIETIES: SUMMARY, STATES, 1968-69 AND TOTAL, 1967-68

	1968-69(a)							1967-68 (a)
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total	Total
<b>Societies making returns—</b>								
Permanent . . . . .	69	40	34	6	15	6	170	159
Starr-Bowkett . . . . .	89	2	4	21	1	..	117	119
Terminating(b) . . . . .	2,518	1,143	526	..	266	75	4,528	4,272
<b>Total . . . . .</b>	<b>2,676</b>	<b>1,185</b>	<b>564</b>	<b>27</b>	<b>282</b>	<b>81</b>	<b>4,815</b>	<b>4,550</b>
Shareholders . . . . .	307,009	67,602	65,317	26,373	56,556	12,316	535,173	458,881
Borrowers . . . . .	n.a.	65,058	30,378	7,633	20,885	6,947	n.a.	n.a.
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Administrative expenses . . . . .	11,359	2,494	1,013	291	1,036	310	16,504	13,061
Loans paid over . . . . .	176,282	53,059	38,044	7,901	48,650	8,739	332,675	260,018
<b>Liabilities—</b>								
Investing members' funds . . . . .	384,816	24,894	72,283	16,010	36,607	14,010	548,620	394,807
Borrowing members' funds . . . . .	113,180	59,658	9,595	..	2,122	1,068	185,623	178,241
Deposits . . . . .	10,117	52,880	2,959	3,139	42,122	14,898	126,115	72,395
Loans due to governments . . . . .	119,722	96,311	26,574	9,881	25,566	5,663	283,716	257,638
Other liabilities . . . . .	266,154	120,641	36,383	421	27,268	3,260	454,127	441,742
<b>Total liabilities . . . . .</b>	<b>893,989</b>	<b>354,384</b>	<b>147,794</b>	<b>29,452</b>	<b>133,685</b>	<b>38,900</b>	<b>1,598,205</b>	<b>1,344,823</b>
<b>Assets—</b>								
Advances on mortgages(c) . . . . .	828,209	344,553	137,425	27,529	115,934	36,610	1,490,259	1,266,294
Other assets . . . . .	65,780	9,832	10,369	1,923	17,752	2,289	107,945	78,529
<b>Total assets . . . . .</b>	<b>893,989</b>	<b>354,384</b>	<b>147,794</b>	<b>29,452</b>	<b>133,685</b>	<b>38,900</b>	<b>1,598,205</b>	<b>1,344,823</b>

(a) At various balance dates within the financial year shown. (b) Co-operative housing and other terminating societies. (c) Includes advances on mortgages of terminating societies which are mainly on a gross basis. Net advances may be derived by subtracting 'Borrowing members' funds'.

## Permanent building societies

The following statistics summarise information obtained from a monthly collection introduced in May 1969 and relate to the operations of permanent building societies in all States and the Australian Capital Territory.

PERMANENT BUILDING SOCIETIES: SUMMARY, STATES, 1969-70  
(\$'000)

	Loans approved during year(a)	Loans advanced during year(b)	Loans approved but not advanced at end of year(c)	Principal owing on mortgages at end of year	Paid-up share-capital at end of year	Borrowings by societies— amount owing at end of year(d)
New South Wales . . . . .	177,586	175,091	32,475	503,585	500,709	68,335
Victoria . . . . .	39,898	38,167	7,752	109,998	27,888	74,658
Queensland . . . . .	40,587	39,717	3,020	99,981	100,151	8,991
South Australia . . . . .	14,038	12,913	1,930	37,075	22,815	16,750
Western Australia . . . . .	90,319	93,040	9,318	194,977	125,541	79,585
Tasmania . . . . .	10,095	10,064	1,014	33,796	16,028	17,850
Australian Capital Territory . . . . .	6,032	5,711	1,389	14,182	4,041	10,384
<b>Total . . . . .</b>	<b>378,555</b>	<b>374,703</b>	<b>56,898</b>	<b>993,595</b>	<b>797,173</b>	<b>276,553</b>

(a) Includes loans approved for flats and home units, supplementary loans approved to complete the original purchase or construction of a house, flat or home unit and second mortgage loans approved. (b) Includes capitalised mortgage insurance premiums and other capitalised charges. (c) Excludes cancellations of loan approvals. (d) Includes deposits with societies, advances under Commonwealth and State Housing Agreements but excludes unsecured borrowings from banks.

## FRIENDLY SOCIETIES AND CO-OPERATIVE SOCIETIES

## Friendly societies

In 1969 the total membership of friendly societies in Australia was about 424,000, but as certain benefits such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must be more than doubled to arrive at an estimate of the number of persons who receive some direct benefit from these societies, even when due allowances are made for young and unmarried members. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules conform to the law, and that the scale of contribution is sufficient to provide the promised benefits. Societies are obliged to forward to the Registrar annual returns about their membership and their finances, and reports dealing with the returns received are published in most of the States.

## FRIENDLY SOCIETIES(a): SUMMARY, STATES, 1968-69

	N.S.W. (b)	Vic.	Qld	S.A.	W.A.	Tas.(c)	Total
Registered societies . . . . .	43	124	17	14	11	9	218
Branches . . . . .	1,676	1,091	400	542	248	112	4,069
Benefit members at end of year . .	136,037	153,591	63,390	50,880	15,465	4,882	424,245
Average benefit members during year . . . . .	139,030	153,787	63,224	50,975	15,590	4,786	427,392
Members who received sick pay . .	n.a.	24,183	5,955	7,538	2,179	795	n.a.
Total weeks sick pay granted . .	n.a.	388,113	105,038	147,483	51,857	19,969	n.a.
Average weeks per member sick . .	n.a.	16.0	17.6	19.6	23.8	25.1	n.a.
Deaths of benefit members . . . .	n.a.	2,586	1,309	1,077	372	245	n.a.
Proportion of deaths per 1,000 members (average) . . . . .	n.a.	16.8	20.7	21.1	23.9	51.2	n.a.
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Revenue—							
Entrance fees, levies and members' contributions . . . . .	17,157	15,718	3,295	7,093	2,587	58	45,909
Interest, dividends and rents . .	1,336	2,311	473	869	153	81	5,224
All other revenue . . . . .	571	324	276	720	141	17	2,050
Total revenue . . . . .	19,065	18,353	4,044	8,682	2,881	156	53,182
Expenditure—							
Sick pay . . . . .	470	570	129	187	38	20	1,415
Medical attendance and medicine .	13,106	10,145	2,651	6,027	2,337	2	34,268
Sums payable at death . . . . .	555	266	202	145	51	50	1,269
Administration . . . . .	2,918	2,969	782	1,143	194	37	9,984
All other expenditure . . . . .	359	926		483	144	30	
Total expenditure . . . . .	17,408	14,877	3,764	7,985	2,764	139	46,936
Total Funds . . . . .	30,200	41,854	10,446	18,188	4,027	1,390	106,105

(a) Excludes juvenile branches, dispensaries, medical institutes, and certain miscellaneous societies. Receipts and payments of subsidy under the Commonwealth medical and hospital benefit schemes are excluded. (b) Includes the Australian Capital Territory. (c) Year 1969.

## Co-operative societies

Co-operative societies are divided into three classes: (i) those engaged in the manufacture and marketing of primary products and trade requirements; (ii) those engaged in retailing general household requirements; and (iii) those engaged in activities covered by both classes (i) and (ii). The first class may be described briefly as producers' co-operative societies and the second as consumers' co-operative societies. The particulars given for New South Wales relate to societies registered under the Co-operation Act, 1923-1967. A summary of the business of all co-operative societies for the year 1968-69 for all States is given in the following table. Separate particulars for each of the three types of co-operative societies are given in the annual bulletin *Insurance and Other Private Finance*, and issue No. 7, 1969-70 contains details for 1967-68 and 1968-69.

## CO-OPERATIVE SOCIETIES: STATES, 1968-69

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Societies . . . No.	362	155	765	66	69	16	1,433
Members . . . No.	346,083	144,138	157,954	130,355	70,728	5,705	854,963
Income—	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Gross turnover (sales) .	347,657	140,959	174,088	58,349	75,884	10,081	807,019
Other income . . .	4,549	6,921	13,247	4,847	20,736	1,198	51,498
Total . . .	352,206	147,881	187,335	63,196	96,620	11,279	858,517
Expenditure—							
Total purchases . . }	345,299	105,419	130,503	43,342	68,777	8,411	832,240
Other expenditure . . }		36,780	51,220	16,221	23,675	2,595	
Total . . .	345,299	142,199	181,722	59,562	92,452	11,006	832,240
Rebates and bonuses .	5,711	1,390	1,904	2,877	4,077	39	15,998
Dividends on share capital	1,777	1,415	1,196	472	769	50	5,679
Liabilities—							
Paid-up capital . .	39,561	24,513	27,394	8,577	12,203	1,221	113,469
Bank overdrafts . .	50,580	19,192	19,437	4,082	7,354	821	101,467
Accumulated profits . }	23,759	2,771	7,751	1,584	185	566	107,315
Reserve funds . . }		20,863	31,219	6,985	11,046	585	
Loan capital . . }		8,772	21,660	14,048	47,813	1,260	252,036
Sundry creditors . . }	57,585	20,278	29,397	4,628	12,516	1,647	
Other liabilities . . }		6,995	12,989	9,120	3,087	242	
Total . . .	171,484	103,384	149,847	49,024	94,205	6,342	574,286
Assets—							
Land and buildings . }	70,959	45,849	33,417	11,406	7,520	1,379	268,005
Machinery, plant and other fixed assets . }			42,634	7,497	46,704	640	
Stocks . . .	54,359	15,830	11,122	11,816	7,944	961	102,032
Sundry debtors . .	35,354	29,569	51,428	7,809	23,624	2,393	150,178
Cash in hand and on deposit . . }	10,811	2,169	3,694	902	2,111	260	54,071
Profit and loss account . }		3,231	1,341	329	96		
Other assets . . }		6,737	6,211	9,265	6,206	709	
Total . . .	171,484	103,384	149,847	49,024	94,205	6,342	574,286



# LOTTERIES AND BETTING

## Lotteries

State Governments operate lotteries in New South Wales, Queensland, South Australia, and Western Australia. The Lotteries Commission of South Australia commenced operations on 15 May 1967. Tattersall Sweep Consultations are operated under government licence in Victoria and also sell tickets under government licence in Tasmania and New Zealand. The statistics of sales of tickets and prizes for Victoria include sales and allotments of prizes in Tasmania and New Zealand by Tattersall Sweep Consultations, Victoria. Tasmanian Lotteries were operated under government licence until 30 September 1961, when they surrendered their licence. In general, revenue derived by the State Governments from these lotteries is used directly or indirectly to provide funds for expenditure on hospitals, charities, etc. For information as to the origin, purpose and method of payment of proceeds or taxes to State revenues *see* Year Book No. 46, page 808 and earlier issues.

### LOTTERIES: VALUE OF TICKET SALES, PRIZES ALLOTTED, TAXES PAID AND OTHER NET CONTRIBUTIONS TO STATE GOVERNMENT REVENUES 1965-66 TO 1969-70 (\$'000)

Year	N.S.W.	Vic.	Qld	S.A.(a)	W.A.	Total
TICKET SALES						
1965-66 . . .	48,095	20,396	14,360	..	4,025	86,876
1966-67 . . .	50,171	20,300	14,620	500	4,775	90,366
1967-68 . . .	50,528	19,420	15,900	5,200	4,350	95,398
1968-69 . . .	53,335	19,440	16,680	5,350	5,150	99,955
1969-70 . . .	55,645	21,400	17,600	5,700	6,200	106,545

PRIZES ALLOTTED						
1965-66 . . .	30,815	12,238	9,163	..	2,339	54,555
1966-67 . . .	30,904	12,180	9,332	300	2,803	55,519
1967-68 . . .	30,850	11,652	10,151	3,129	2,493	58,275
1968-69 . . .	32,843	11,664	10,651	3,241	3,001	61,400
1969-70 . . .	34,052	12,840	11,237	3,460	3,757	65,346

TAXES PAID AND OTHER NET CONTRIBUTIONS TO STATE GOVERNMENT REVENUES(b)						
1965-66 . . .	11,217	6,294	3,588	..	1,146	22,245
1966-67 . . .	11,892	6,296	3,710	50	1,317	23,265
1967-68 . . .	11,809	6,020	4,006	1,603	1,236	24,675
1968-69 . . .	12,202	6,026	4,160	1,501	1,437	25,326
1969-70 . . .	12,712	6,634	4,358	1,927	1,643	27,274

(a) The Lotteries Commission of South Australia commenced operations on 15 May 1967.  
(b) Includes grants to Tasmanian and New Zealand governments by Tattersall Sweep Consultations, Victoria.

**Betting**

**TOTALIZATOR INVESTMENTS AND INVESTMENTS WITH LICENSED BOOKMAKERS  
STATES AND AUSTRALIAN CAPITAL TERRITORY, 1965-66 TO 1969-70  
(\$'000)**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A. (a)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T. (b)</i>	<i>Total</i>
<b>TOTALIZATOR INVESTMENTS</b>								
1965-66	94,317	163,006	39,978	4,702	42,568	1,149	1,974	347,695
1966-67	146,084	179,490	47,339	7,207	43,077	1,174	2,567	426,938
1967-68	196,120	200,253	55,330	20,030	46,180	1,277	3,098	522,288
1968-69	241,350	224,955	61,003	26,292	52,938	1,145	4,215	611,897
1969-70	292,442	245,993	81,771	31,679	60,913	1,250	7,092	721,141
<b>INVESTMENTS WITH LICENSED BOOKMAKERS(c)</b>								
1965-66	267,987	160,453	118,560	55,022	20,691	32,137	n.a.	n.a.
1966-67	283,346	168,381	123,506	55,740	24,817	35,091	n.a.	n.a.
1967-68	283,262	172,603	131,145	49,189	27,332	42,090	n.a.	n.a.
1968-69	282,497	172,388	141,167	50,263	32,189	41,705	n.a.	n.a.
1969-70	310,881	183,296	145,837	58,165	38,972	44,899	n.a.	n.a.

(a) Totalisator Agency Board commenced operating on 29 March 1967. (b) Off-course investments only.  
(c) Estimated from taxes on betting with licensed bookmakers.

**PROBATES AND LETTERS OF ADMINISTRATION**

The following table gives some particulars of the number and value of estates of deceased persons in each State for the latest year for which information is available. Owing to differences in legislation in the various States the figures are not entirely comparable.

**PROBATES AND LETTERS OF ADMINISTRATION: STATES**

	<i>N.S.W. 1969-70(a)</i>	<i>Vic. 1969</i>	<i>Qld 1969-70</i>	<i>S.A. 1969</i>	<i>W.A. 1968-69(b)</i>	<i>Tas. 1969(c)</i>
Estates . . . . . No.	28,250	21,088	9,228	5,161	4,732	1,638
Gross value . . . . . \$'000	n.a.	412,832	150,018	85,557	n.a.	32,966
Net value . . . . . \$'000	478,637	372,072	139,904	80,347	60,336	30,367

(a) Total estates of deceased persons assessed for death duty. (b) Net value includes duty-free bequests of \$846,355.  
(c) Estates dealt with by the Taxation Department.

## AUSTRALIAN INDUSTRY DEVELOPMENT CORPORATION

The Australian Industry Development Corporation was established by the *Australian Industry Development Corporation Act 1970* and commenced operations on 1 February 1971. Within the objectives and broad policy guidelines defined in the Act the Corporation operates independently of Government as a commercial enterprise governed by its own Board of Directors. It is not subject to direction by or on behalf of the Commonwealth.

The Corporation has a capital of \$100 million, to be subscribed solely by the Commonwealth. The capital is initially paid to \$25 million with provision for the remainder to be paid in instalments, but the whole is available if required to meet obligations.

The central objectives of the Corporation are to promote the development of industries in Australia and support local participation in the ownership and control of industries and resources. Consistent with these objectives and the principle that A.I.D.C. must operate on a commercial basis and assist only in ventures which can demonstrate sound prospects, the Corporation provides finance, obtained principally by overseas borrowings, for essentially Australian-owned firms (including local firms with foreign partners) engaged in new development or expansion in the manufacturing, processing and mining industries.

The Corporation's financial participation in a venture is governed by the prevailing terms and conditions under which it can itself obtain loan finance from overseas. The capital of the Corporation is provided as a base for its borrowings and is not directly used for assistance to industry projects.

The Corporation participates in the financing of a development only at the invitation of the enterprise concerned and in the manner dictated by the needs of the project. Its assistance may be given in a variety of ways, such as loan investments or guarantees, or by temporarily taking a minority equity position.





## CHAPTER 18

### PUBLIC FINANCE

The subject of public finance is dealt with in this chapter under the two major divisions of Commonwealth Finance and State Finance. The close financial relations between the Commonwealth and States, however, particularly since the Financial Agreement has been in operation, demand also a combination of these two divisions under the heading of Commonwealth and State Finance. Under the Financial Agreement the Commonwealth assumed the liability to bondholders for the States' securities existing at the date of the Agreement and now arranges for all borrowings for and on behalf of the Commonwealth or any State and for all conversions, renewals, redemptions and consolidations of such securities. In view of this it is convenient to deal with the Commonwealth and State Government securities on issue in a separate division of this chapter (pages 568–75). The subject of income taxes is also dealt with in a separate division at the end of this chapter (pages 579–89).

For further detailed information on the subjects covered by this chapter *see* the annual bulletins published by this Bureau: *Australian National Accounts*; *National Income and Expenditure*; *Commonwealth Finance*; *State, Territory and Local Government Authorities' Finance and Government Securities*; and *Commonwealth Taxation Assessments*. Current information in summarised form is contained in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, and the *Digest of Current Economic Statistics*. A mimeographed bulletin *Commonwealth, State and Territory Taxation Collections* is issued annually as soon as possible after the relevant information has been assembled.

### COMMONWEALTH FINANCE

#### Financial provisions of the Constitution

The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Sections 81 to 105A of the Commonwealth Constitution (*see* pages 16–19 of this Year Book). Two other sections which have a most important bearing on questions of Commonwealth finance are sections 69 and 51.

Section 69 provides for the transfer from the States to the Commonwealth of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments. Sections 87 and 96 deal with the financial relations between the Commonwealth and the States. These matters have been treated in previous issues of the Year Book, and on pages 543–7 of this issue a summary is given of the present provisions for Commonwealth financial assistance to the States.

The *Audit Act* 1901–1969 lays down the procedure which must be followed in accounting for the receipt and disbursement of public funds. The general administration of Commonwealth finances is the responsibility of the Treasurer of the Commonwealth.

### Commonwealth Budget

The Commonwealth Budget results include transactions of the Consolidated Revenue Fund, the Trust Fund and the Loan Fund. Ordinary revenues from taxation and other sources are paid into the Consolidated Revenue Fund, from which the main expenditures are for defence, war and repatriation services, social services, payments to the States and administration. The Trust Fund covers special transactions outside the ordinary operations of departmental expenditures, such as pension funds and moneys held for expenditure by the Commonwealth at some future time. The Loan Fund receives its funds from the sale of Commonwealth securities, and expenditures from the Fund are made in accordance with the purpose of issue of each loan. The main disbursements from the Loan Fund are to the States, either by way of distribution of the proceeds of loans raised by the Commonwealth

on their behalf or in accordance with the provisions of the Commonwealth and State Housing Agreements, and the remaining disbursements are for Commonwealth purposes such as defence or war service land settlement.

### Summary of receipts and expenditure

A summary of Commonwealth Budget results for 1969-70 and the four preceding years is given in the table which follows. The transactions are recorded on a cash basis.

**COMMONWEALTH BUDGET: SUMMARY OF TRANSACTIONS**  
1965-66 TO 1969-70  
(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
Expenditure(a) . . . . .	5,009	5,571	6,148	6,569	7,088
Receipts(a) . . . . .	4,754	5,019	5,506	6,184	7,081
Deficit . . . . .	255	552	642	385	7
Financing—					
United States Defence Credit (net) . . . . .	..	91	118	55	-3
Other overseas borrowings . . . . .	-23	-62	14	88	-128
Issue of securities in Australia—					
Net loan proceeds(b) . . . . .	298	408	297	381	263
Net change in Treasury notes on issue . . . . .	36	-26	184	-68	-137
Borrowings from the Reserve Bank . . . . .	-36	165	51	-127	-14
Total securities issued in Australia . . . . .	298	546	532	186	112
Funds provided for International Monetary					
Fund drawings of Australian currency . . . . .	-40	-27	-59	-5	..
Use of Cash Balances . . . . .	..	-1	..	..	-19
Other financing transactions in Australia(c) . . . . .	21	5	37	62	45
Deficit . . . . .	255	552	642	385	7

(a) Comparisons between the figures for 1965-66 and 1966-67 are affected by accounting changes in 1966-67 which reflect the revision of the National Debt Sinking Fund Act. In addition, the figures for 1966-67 and subsequent years have been adjusted to eliminate the effects of accounting changes occurring in 1968-69 and 1970-71. This series has not been adjusted for accounting changes introduced in the Budget for 1971-72. See Appendix. (b) Includes State domestic raisings. (c) Includes funds obtained from coinage and bullion transactions, amounts borrowed by Commonwealth trust accounts, net amounts available from Commonwealth trust account transactions in Commonwealth Government securities, amounts available from moneys held in trust, etc.

Minus sign (—) denotes decrease.

### All Commonwealth funds: summary of receipts and outlay

The following table represents a reclassification of Commonwealth Government receipts and outlay in a National Accounts form. It includes the Commonwealth Government components (with slight re-arrangement) of tables 57 and 60 in *Australian National Accounts, National Income and Expenditure*, 1969-70. However, an important conceptual difference in this table is that no adjustment is made for the difference between deliveries of, and payments for, major items of defence equipment from overseas. The table differs from that shown in Statement No. 6 attached to the Budget Speech in that the transactions of the post office are included on a commercial basis, whilst borrowing and the corresponding advances in respect of State works programmes are excluded. The treatment of certain other advances and repayments also varies slightly in this table. They are all classified on the outlay side whereas in the Budget table some are included in the deficit.

The tables on pages 531-43 mainly follow (unrevised "All Commonwealth funds") figures given in Section I pages 1 to 17 of *Commonwealth Finance*, 1969-70. For later details relating to the transactions of all Commonwealth public authorities compiled in accordance with national accounting concepts, on a basis consistent with statistics for the public authority sector included in *National Income and Expenditure* 1970-71 (and Section II of *Commonwealth Finance* 1969-70 pages 18-21) See *Public Authority Finance: Commonwealth Authorities* 1970-71 (Reference No. 5.12) (formerly *Commonwealth Finance*) pages 1-31.

**ALL COMMONWEALTH FUNDS: RECEIPTS AND OUTLAY, 1965-66 TO 1969-70**  
(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>RECEIPTS</b>					
<b>Current receipts—</b>					
Taxation . . . . .	4,223	4,494	4,957	5,535	6,387
Fines, etc. . . . .	1	1	1	1	1
Business undertakings—gross operating surplus(a) .	104	94	130	167	175
Rent, royalties and dividends . . . . .	24	20	16	21	28
Interest . . . . .	66	71	55	61	65
<i>Total current receipts . . . . .</i>	<i>4,416</i>	<i>4,679</i>	<i>5,157</i>	<i>5,783</i>	<i>6,657</i>
<b>Capital receipts—</b>					
Net borrowing—					
Government securities—					
Australia . . . . .	—38	15	137	—259	57
Overseas . . . . .	4	121	210	167	—43
Net receipts of private trust funds . . . . .	31	21	51	57	57
Other funds available . . . . .	12	10	—2	51	31
<i>Total capital receipts . . . . .</i>	<i>9</i>	<i>167</i>	<i>396</i>	<i>16</i>	<i>102</i>
<b>Reduction in—</b>					
Cash and bank balances . . . . .	2	—13	15	—1	—19
Security holdings . . . . .	—89	—7	—172	—141	—393
<i>Total receipts . . . . .</i>	<i>4,338</i>	<i>4,826</i>	<i>5,395</i>	<i>5,656</i>	<i>6,347</i>

(a) The excess of total revenue over working expenses before providing for substantial additional capital costs (interest, provisions for depreciation or debt redemption).

ALL COMMONWEALTH FUNDS: RECEIPTS AND OUTLAY, 1965-66 TO 1969-70—*contd*  
(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>OUTLAY</b>					
Current outlay—					
Net current expenditure on goods and services—					
Purchase of goods and services and grants to organisations . . . . .	1,137	1,400	1,630	1,771	1,794
<i>Less</i> Fees and charges for goods and services . . . . .	-56	-61	-65	-103	-108
Total . . . . .	1,082	1,339	1,565	1,668	1,687
Transfers to other sectors—					
Interest . . . . .	73	72	88	83	93
Cash benefits to persons . . . . .	1,154	1,243	1,292	1,405	1,597
Subsidies . . . . .	114	128	134	210	184
Overseas grants and contributions . . . . .	127	151	154	159	180
Grants for private capital purposes . . . . .	47	45	57	31	33
Total . . . . .	1,515	1,638	1,724	1,889	2,087
Transfers to other public authorities—					
Interest . . . . .	-60	-70	-77	-85	-103
Grants to States . . . . .	876	965	1,057	1,155	1,310
Grants to semi-government authorities . . . . .	69	70	72	82	96
Total . . . . .	886	965	1,051	1,152	1,303
<i>Total current outlay</i> . . . . .	3,482	3,943	4,340	4,708	5,077
Capital outlay—					
Purchase of fixed assets and increase in stocks—					
Purchases of new assets . . . . .	302	336	386	438	475
Purchases of existing assets . . . . .	5	6	9	19	13
<i>Less</i> Sales of existing assets . . . . .	-13	-9	-12	-15	-16
Increase in stocks . . . . .	-2	-2	-4	-3	-3
Total . . . . .	292	331	379	439	469
Transfers to other sectors—					
Advances to the private and overseas sectors . . . . .	151	116	146	101	341
<i>Less</i> Repayments of advances . . . . .	-34	-37	-39	-43	-120
Total . . . . .	117	79	108	58	221
Transfers to other public authorities—					
Grants to States . . . . .	199	218	255	264	312
Grants to semi-government authorities . . . . .	37	49	53	55	57
Advances to States . . . . .	173	167	200	177	212
<i>Less</i> Repayments of advances to States . . . . .	-28	-31	-31	-67	-38
Advances to semi-government authorities . . . . .	68	70	93	30	67
<i>Less</i> Repayments of advances to semi-government authorities . . . . .	-1	-2	-2	-7	-29
Total . . . . .	447	472	568	451	580
<i>Total capital outlay</i> . . . . .	857	882	1,055	948	1,270
Total outlay . . . . .	4,338	4,826	5,395	5,656	6,347

### All Commonwealth funds: outlay, economic type and function

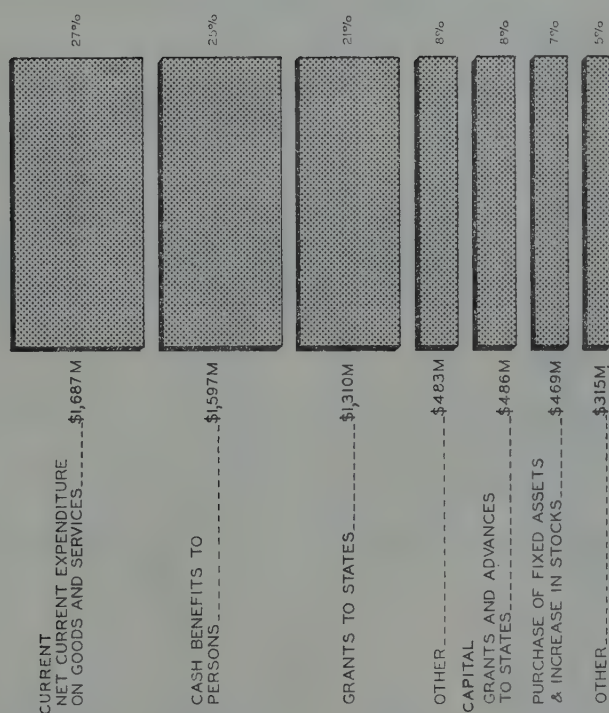
In the following two tables the outlay of all Commonwealth funds is shown in terms of a functional classification. The table on page 534 presents for 1969-70 the outlay under each functional head classified by economic type, highlighting the government's own demand for goods and services and the redistributive effect of its outlays. Current and capital outlay under each functional head are shown for the years 1965-66 to 1969-70 on page 535.



# ALL COMMONWEALTH FUNDS

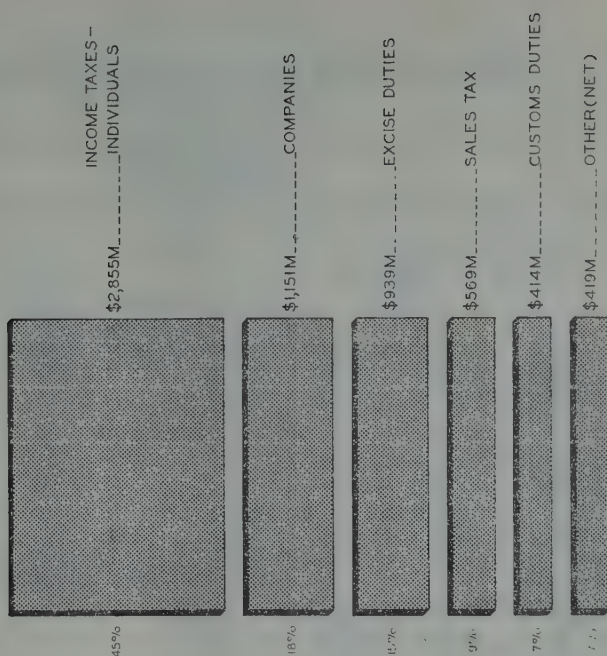
1969-70

## OUTLAY



TOTAL - \$6,347 MILLION

## RECEIPTS



TOTAL - \$6,347 MILLION

**ALL COMMONWEALTH FUNDS: TOTAL OUTLAY, BY ECONOMIC TYPE  
AND FUNCTION, 1969-70**  
(\$ million)

CURRENT OUTLAY								
	<i>Expen- diture on goods and services</i>	<i>Cash benefits</i>	<i>Sub- sidies</i>	<i>Over- seas grants</i>	<i>Current Grants to States</i>	<i>Current grants to semi- govern- ment auth- orities</i>	<i>Grants for private capital purposes</i>	<i>Total</i>
Law, order and public safety . . . . .	16	..	..	..	..	..	..	16
Education . . . . .	19	37	..	1	77	21	2	157
Cultural and recrea- tional facilities . . . . .	15	..	..	..	..	..	..	15
Public health . . . . .	33	345	..	..	..	..	..	380
Welfare . . . . .	30	982	..	..	1	..	13	1,026
War and defence . . . . .	1,017	..	..	25	..	..	..	1,042
Repatriation . . . . .	84	226	..	..	..	..	6	316
Development of re- sources and assistance to industry . . . . .	115	..	159	1	14	58	..	347
Transport and com- munication . . . . .	42	..	3	7	..	1	..	53
Legislature and general administration . . . . .	190	..	..	..	..	..	..	190
Foreign affairs . . . . .	31	..	..	45	..	..	..	75
Immigration . . . . .	59	5	..	1	..	..	..	65
Regulation of trade and industry . . . . .	13	1	22	..	..	14	..	50
Housing . . . . .	5	..	..	..	..	..	12	17
Other . . . . .	-2	..	..	97	..	1	..	97
Not allocated to function	18	..	..	2	1,218	2	..	(a)1,230
<b>Total current outlay . . . . .</b>	<b>1,687</b>	<b>1,597</b>	<b>184</b>	<b>180</b>	<b>1,310</b>	<b>96</b>	<b>33</b>	<b>5,077</b>
CAPITAL OUTLAY								
	<i>Expenditure on new assets and stocks</i>	<i>Net pur- chases of existing assets</i>	<i>Capital grants to States</i>	<i>Capital grants to semi- govern- ment auth- orities</i>	<i>Net advances to States</i>	<i>Other net advances</i>		<i>Total</i>
Education . . . . .	5	..	71	4	..	..		80
Cultural and recrea- tional facilities . . . . .	5	..	..	..	..	..		5
Public health . . . . .	4	..	7	..	..	..		11
War and defence . . . . .	..	2	..	..	..	..		2
Development of re- sources and assistance to industry . . . . .	10	..	18	2	-2	184		212
Transport and communi- cation—								
Post office . . . . .	336	7	..	..	..	..		343
Civil aviation . . . . .	39	2	..	..	..	-16		25
Roads . . . . .	9	..	199	..	-1	..		208
Other . . . . .	15	..	12	..	5	14		47
Power, fuel and light . . . . .	..	..	..	..	10	34		43
Housing . . . . .	13	-15	..	..	127	32		158
Other . . . . .	34	2	5	..	..	3		44
Not allocated to function	1	..	..	50	35	8		94
<b>Total capital outlay . . . . .</b>	<b>472</b>	<b>-3</b>	<b>311</b>	<b>57</b>	<b>174</b>	<b>259</b>		<b>1,270</b>

(a) Including interest —\$10 million.

The following table shows outlay from all Commonwealth funds for the years 1965–66 to 1969–70, classified according to function and irrespective of economic type.

ALL COMMONWEALTH FUNDS: TOTAL OUTLAY, BY FUNCTION  
1965-66 TO 1969-70  
(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
CURRENT OUTLAY					
Law, order and public safety . . . . .	7	10	12	13	16
Education . . . . .	81	91	107	120	157
Cultural and recreational facilities . . . . .	5	6	9	10	15
Public health . . . . .	249	271	291	323	380
Welfare . . . . .	721	797	826	890	1,026
War and defence . . . . .	710	914	1,067	1,092	1,042
Repatriation . . . . .	267	266	276	302	316
Development of resources and assistance to industry . . . . .	233	267	308	365	347
Transport and communication . . . . .	29	33	41	44	53
Legislature and general administration . . . . .	107	137	149	164	190
Foreign affairs . . . . .	45	50	61	66	75
Immigration . . . . .	39	42	44	59	65
Regulation of trade and industry . . . . .	28	35	43	47	50
Housing . . . . .	18	16	18	18	17
Other . . . . .	85	92	82	86	97
Not allocated to function . . . . .	858	916	1,008	1,109	1,230
<b>Total current outlay . . . . .</b>	<b>3,482</b>	<b>3,943</b>	<b>4,340</b>	<b>4,708</b>	<b>5,077</b>
CAPITAL OUTLAY					
Education . . . . .	34	47	61	64	80
Cultural and recreational facilities . . . . .	8	8	7	8	5
Public health . . . . .	10	11	8	8	11
War and defence . . . . .	4	2	2	10	2
Development of resources and assistance to industry . . . . .	25	18	54	24	212
Transport and communication—					
Post office . . . . .	215	235	267	305	343
Civil aviation . . . . .	38	47	81	26	25
Roads . . . . .	153	163	173	184	208
Other . . . . .	42	38	48	47	47
Power, fuel and light . . . . .	42	47	46	34	43
Housing . . . . .	157	151	141	143	158
Other . . . . .	19	26	31	46	44
Not allocated to function . . . . .	110	87	137	48	94
<b>Total capital outlay . . . . .</b>	<b>857</b>	<b>882</b>	<b>1,055</b>	<b>948</b>	<b>1,270</b>
TOTAL OUTLAY					
<b>Total outlay . . . . .</b>	<b>4,339</b>	<b>4,825</b>	<b>5,395</b>	<b>5,656</b>	<b>6,347</b>

### Main components of all Commonwealth funds outlay

The tables on pages 536-43 supply details of some of the main components of total outlay of the Commonwealth Government.

#### Defence

In addition to showing departmental components of total current outlay on defence during the years 1965-66 to 1969-70, the following table also includes annual totals of other outlay on defence classified to overseas grants and contributions and to net purchases of existing assets. Details of the expenditure on defence shown in the following table cover expenditure from all funds (including U.S. Defence Credit) by the services and associated departments including costs of maintaining forces in overseas posts.

#### ALL COMMONWEALTH FUNDS: OUTLAY ON DEFENCE

(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>Current Outlay—</b>					
Department of Defence—					
Administrative and general expenses . . . . .	5,053	6,395	7,816	8,017	9,331
Recruiting campaign . . . . .	1,646	1,556	1,600	1,611	1,775
Buildings, works, etc. . . . .	181	931	1,507	1,797	3,363
Plant and equipment . . . . .	1,890	906	253	1,065	284
Defence Aid for Malaysia and Singapore . . . . .	5,034	8,036	6,096	6,243	8,203
S.E.A.T.O. Military Planning Office—Con- tribution towards cost . . . . .	18	18	22	24	22
Maintenance and rent . . . . .	202	238	198	313	462
	14,024	18,080	17,492	19,071	23,440
Less Receipts . . . . .	..	..	..	74	1
Total . . . . .	14,024	18,080	17,492	18,997	23,439
<b>Department of the Navy—</b>					
Naval forces—Pay, administrative and gen- eral expenses . . . . .	68,027	79,346	87,285	99,882	111,025
Naval construction and additions to the fleet	44,918	52,616	53,127	47,250	33,131
General stores . . . . .	29,264	37,527	40,772	52,447	55,492
Ships, aircraft, etc.—					
Purchase and manufacture . . . . .	6,886	7,210	8,668	4,794	4,114
Repairs and maintenance . . . . .	8,608	10,867	20,050	10,485	12,903
Buildings, works, etc. . . . .	6,930	7,211	6,833	6,522	11,386
Machinery and plant for dockyards and establishments . . . . .	1,326	2,108	1,900	2,577	2,829
Defence research and development . . . . .	263	348	329	240	224
Maintenance and rent . . . . .	3,159	3,692	3,705	4,793	5,449
Retirement benefits . . . . .	1,229	1,392	2,097	2,453	2,889
Other . . . . .	2,460	3,053	3,130	2,196	1,777
	173,070	205,369	227,896	233,639	241,219
Less Receipts . . . . .	3,892	4,260	4,333	4,652	4,187
Total . . . . .	169,179	201,109	223,563	228,987	237,032
<b>Department of the Army—</b>					
Military forces—Pay, administrative and general expenses . . . . .	133,500	169,865	197,276	216,332	245,579
Forces overseas (other than pay) . . . . .	9,773	26,440	34,048	45,836	23,823
Arms, armament and equipment . . . . .	67,921	84,675	96,143	115,602	108,614
Buildings, works, etc. . . . .	35,821	56,863	38,769	16,860	14,553
Maintenance and rent . . . . .	7,503	8,447	9,829	12,447	14,965
Retirement benefits . . . . .	3,657	3,827	4,758	6,010	7,105
Other . . . . .	509	468	463	..	..
	258,684	350,585	381,288	413,087	414,639
Less Receipts . . . . .	2,297	2,880	2,254	4,619	3,535
Total . . . . .	256,389	347,705	379,035	408,468	411,104



ALL COMMONWEALTH FUNDS: OUTLAY ON DEFENCE—*continued*  
(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>Department of Air—</b>					
Air force—Pay, administrative and general expenses . . . . .	77,541	86,630	97,067	113,391	123,376
Forces overseas (other than pay) . . . . .	7,080	9,447	13,998	19,264	19,211
<b>Aircraft—</b>					
Purchase and manufacture . . . . .	62,353	106,383	172,317	136,470	55,066
Repairs and maintenance . . . . .	6,380	8,037	9,367	9,452	11,323
Equipment and stores . . . . .	42,980	50,390	58,442	70,063	66,183
Buildings, works, etc. . . . .	12,938	11,587	16,559	17,212	10,191
Maintenance and rent . . . . .	6,024	7,096	7,912	9,335	9,944
Retirement benefits . . . . .	2,582	2,808	3,165	4,040	4,980
Other . . . . .	738	606	606	..	..
	218,616	282,984	379,433	379,226	300,274
Less Receipts . . . . .	4,336	1,999	1,446	3,351	2,837
<b>Total . . . . .</b>	<b>214,280</b>	<b>280,985</b>	<b>377,989</b>	<b>375,875</b>	<b>297,437</b>
<b>Department of Supply—</b>					
Administrative and general expenses . . . . .	7,944	9,491	10,642	12,458	13,635
Defence research and development . . . . .	33,016	34,262	36,664	39,957	40,626
Production development . . . . .	976	838	1,427	2,168	2,993
<b>Government factories—Maintenance of production capacity . . . . .</b>	<b>2,270</b>	<b>3,358</b>	<b>3,309</b>	<b>3,341</b>	<b>3,473</b>
Transport and storage services . . . . .	7,027	7,661	10,088	9,107	10,534
Reserve stocks . . . . .	2,775	3,568	3,545	2,453	1,177
Munitions factories—Working capital . . . . .	2,004	475	869	2,379	465
Machinery, plant, equipment, etc. . . . .	8,001	10,032	9,355	8,330	9,706
Buildings, works, n.e.i., etc. . . . .	5,259	5,021	4,796	4,772	5,771
Maintenance and rent . . . . .	4,211	4,426	4,300	4,466	5,056
Other . . . . .	18,981	25,197	27,392	..	..
	92,464	104,329	112,387	89,431	93,436
Less Receipts . . . . .	45,290	49,271	49,662	31,031	24,091
<b>Total . . . . .</b>	<b>47,174</b>	<b>55,058</b>	<b>62,725</b>	<b>58,400</b>	<b>69,345</b>
<b>Other—</b>					
Civil Defence . . . . .	724	709	734	786	734
Security Intelligence Organisation . . . . .	1,990	2,565	2,753	2,807	3,053
Other . . . . .	2,780	4,314	1,652	—953	475
<b>Total . . . . .</b>	<b>5,494</b>	<b>7,588</b>	<b>5,140</b>	<b>2,640</b>	<b>4,262</b>
<b>Total current outlay . . . . .</b>	<b>706,539</b>	<b>910,526</b>	<b>1,065,945</b>	<b>1,093,367</b>	<b>1,042,619</b>
<b>Of which—</b>					
Overseas grants and contributions . . . . .	22,678	34,456	25,772	16,160	25,229
Other net current expenditure . . . . .	683,861	876,070	1,040,173	1,077,207	1,017,390
<b>Total current outlay . . . . .</b>	<b>706,539</b>	<b>910,526</b>	<b>1,065,945</b>	<b>1,093,367</b>	<b>1,042,619</b>
<b>Net capital outlay—</b>					
Net purchases of existing assets . . . . .	3,598	2,409	1,653	6,007	1,721
<b>Grand total . . . . .</b>	<b>710,137</b>	<b>912,935</b>	<b>1,067,598</b>	<b>1,099,374</b>	<b>1,044,340</b>

**Education**

Details of Commonwealth government outlay in the field of education are given in chapter 20, Education, Cultural Activities, and Research pages 652-64.

## Subsidies

The following table shows details of Commonwealth outlay from all funds on subsidies and bounties for the years 1965-66 to 1969-70. Other assistance to primary producers is included in, for example, tables relating to cash benefits and payments to the States and additional information is given in Chapter 23, Rural Industry.

**ALL COMMONWEALTH FUNDS: OUTLAY ON SUBSIDIES 1965-66 TO 1969-70**  
(\$'000)

<i>Type of subsidy</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Development of resources and assistance to industry—					
Dairy industry . . . . .	27,000	27,000	27,000	27,000	27,000
Wheat prices stabilisation . . . . .	18,069	16,154	15,508	42,870	..
Phosphate fertilisers . . . . .	24,983	26,319	23,564	31,665	45,820
Oil search . . . . .	11,382	9,931	11,711	12,497	14,298
Nitrogenous fertilisers . . . . .	..	6,665	10,308	11,044	9,876
Copper . . . . .	1	..	..	..	..
Gold mining industry . . . . .	2,462	3,848	4,362	1,791	1,859
Pyrites . . . . .	854	103	..	..	..
Cotton . . . . .	3,686	2,813	4,027	4,620	3,531
Processed milk products . . . . .	614	899	743	638	516
Sulphate of ammonia . . . . .	427	830	565	430	1,081
Vinyl resin . . . . .	1,938	1,592	12	..	..
Copper and brass strip . . . . .	43	..	..	..	..
Sulphuric acid . . . . .	1,906	1,556	1,286	988	740
Tractor . . . . .	1,902	2,221	2,480	2,249	1,757
Cellulose acetate flake . . . . .	228	218	220	179	276
Poultry industry assistance . . . . .	5,536	9,213	10,418	10,920	11,544
Urea . . . . .	..	9	163	424	496
Devaluation compensation . . . . .	..	..	..	35,862	30,069
Book bounty . . . . .	..	..	..	..	1,374
Industrial and development research grants . . . . .	..	..	654	5,300	8,915
Northern Territory drought relief freight concessions . . . . .	178	57	50	2	239
Transport and communication—					
Air services . . . . .	1,200	1,306	1,901	1,780	1,800
Coastal shipping service—					
King Island and Bass Strait Islands . . . . .	161	160	150	141	150
Northern Territory . . . . .	43	44	39	24	27
Northern Territory—					
Air mail service . . . . .	118	..	..	..	..
Railway freight . . . . .	140	110	100	113	87
Superphosphate sea subsidy . . . . .	..	5	43	23	50
Transport of stud stock . . . . .	59	83	80	175	245
South American shipping service . . . . .	335	351	300	180	157
Regulation of trade and industry—					
Petrol prices stabilisation . . . . .	9,920	15,218	16,578	17,948	20,625
Northern Territory petrol prices . . . . .	345	750	991	1,316	1,741
Other . . . . .	400	399	363	68	11
Total . . . . .	113,930	127,854	133,616	210,247	184,284

## Cash benefits to persons

Total payments of cash benefits to persons during the years 1965-66 to 1969-70 are shown in the table following.

**ALL COMMONWEALTH FUNDS: CASH BENEFITS TO PERSONS**  
**1965-66 TO 1969-70**  
 (\$'000)

<i>Type of benefit</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
<b>Education—</b>					
Commonwealth scholarship scheme—					
Post-graduate . . . . .	1,733	2,432	2,899	3,588	4,526
University . . . . .	10,064	13,890	13,383	16,268	18,160
Advanced education . . . . .	198	660	754	1,001	1,628
Secondary . . . . .	5,197	6,243	6,474	6,558	6,738
Technical . . . . .	600	816	1,031	1,123	1,162
Soldiers' children education scheme . . . . .	2,534	2,462	2,720	3,154	3,203
Aboriginal study grants . . . . .	..	..	..	62	225
Aboriginal secondary grants . . . . .	..	..	..	..	502
Other . . . . .	667	672	711	745	796
<i>Total, education . . . . .</i>	<i>20,993</i>	<i>27,175</i>	<i>27,973</i>	<i>32,500</i>	<i>36,941</i>
<b>Health—</b>					
Hospital benefits . . . . .	24,860	25,900	26,598	29,779	40,258
Hospital benefits for pensioners . . . . .	14,659	18,731	23,665	24,520	24,163
Nursing home benefits . . . . .	21,223	22,767	24,486	31,643	46,960
Medical benefits . . . . .	41,282	43,841	46,431	49,556	56,863
Medical benefits for pensioners . . . . .	13,365	14,351	16,116	16,912	19,224
Milk for school children . . . . .	8,493	9,021	9,831	10,053	10,051
Pharmaceutical benefits . . . . .	67,713	72,000	73,019	81,764	95,650
Pharmaceutical benefits for pensioners . . . . .	24,071	29,280	32,115	36,609	41,069
Tuberculosis campaign . . . . .	13,361	10,974	11,266	11,460	10,554
Handicapped children's benefit . . . . .	..	..	..	76	485
<i>Total, health . . . . .</i>	<i>229,028</i>	<i>246,868</i>	<i>263,529</i>	<i>292,372</i>	<i>345,277</i>
<b>Welfare—</b>					
Age and invalid pensions . . . . .	442,355	481,840	513,984	558,587	641,982
Child endowment . . . . .	176,432	199,282	187,920	193,263	220,143
Commonwealth rehabilitation service . . . . .	1,660	1,844	1,944	2,260	2,758
Funeral benefits . . . . .	1,050	1,334	1,338	1,571	1,512
Maternity allowances . . . . .	7,159	7,294	7,349	7,960	8,000
Tuberculosis campaign—allowances . . . . .	1,286	1,193	1,091	921	771
Unemployment benefits, sickness and special benefits . . . . .	15,557	19,044	18,832	16,830	18,592
Widows' pensions . . . . .	50,017	56,438	61,061	69,080	81,753
Sheltered employment allowances . . . . .	..	..	104	288	436
Deserted wives benefits . . . . .	..	..	201	1,149	1,882
Personal care . . . . .	..	..	..	..	1,133
Delivered meals . . . . .	..	..	..	..	196
Other . . . . .	2,268	2,019	2,204	2,980	2,904
<i>Total, welfare . . . . .</i>	<i>697,783</i>	<i>770,288</i>	<i>796,029</i>	<i>854,889</i>	<i>982,062</i>
<b>Development of resources and assistance to industry—</b>					
Wool research studentships and fellowships . . . . .	85	158	270	360	341
<b>Repatriation—</b>					
War and service pensions and allowances . . . . .	198,662	190,842	196,219	216,958	223,366
Other . . . . .	1,849	1,908	1,952	1,981	2,192
<i>Total, repatriation . . . . .</i>	<i>200,511</i>	<i>192,750</i>	<i>198,171</i>	<i>218,939</i>	<i>225,557</i>
<b>Immigration—</b>					
Maintenance of migrant families . . . . .	4,380	5,240	4,803	4,933	5,304
<b>Regulation of trade and industry—</b>					
Coal mining industry—long service leave . . . . .	893	919	918	892	985
<b>Housing—</b>					
Commonwealth-State Housing Agreement—					
Contribution to rental losses . . . . .	213	142	44	60	74
<b>Grand total . . . . .</b>	<b>1,153,886</b>	<b>1,243,540</b>	<b>1,291,737</b>	<b>1,404,945</b>	<b>1,596,541</b>

Further information concerning items in the preceding table is given in the appropriate chapters of this Year Book and in the annual bulletin *Commonwealth Finance* which shows particulars of cash benefits paid to persons in each State and Territory.

### Payments to or for the States

An outline of the provisions of the Constitution providing for the Commonwealth to make payments to the States, and of the systems which followed, is given in earlier issues of the Year Book (see No. 37, pages 633-8). In the following summary tables, a distinction is made between (i) direct Commonwealth financial assistance to the States in the form of grants to provide revenue for general and specific purposes and (ii) those forms of assistance for developmental and other specific purposes which include, in part or in total, payments made in the form of repayable advances. Some information about the more important or most recent of these forms of financial assistance is given on pages 543-7, but for greater detail on these and other forms of financial assistance see earlier issues. Further information is available also in the chapters of this issue dealing with the respective subjects.

*Grants.* The following three tables show particulars of the amounts paid to the States as grants for the purposes referred to in (i) above.

### ALL COMMONWEALTH FUNDS: GRANTS TO THE STATES, BY FUNCTIONS, 1969-70 (\$'000)

Function	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
CURRENT GRANTS							
Education . . . . .	26,803	23,678	10,073	7,645	6,395	2,373	76,967
Welfare . . . . .	366	56	527	37	55	7	1,048
Development of resources and assistance to industry . .	1,862	1,341	9,906	496	599	260	14,464
Not allocated to function—							
Financial assistance grants .	373,908	280,008	176,522	125,706	138,835	46,340	1,141,319
Other . . . . .	18,332	13,489	7,413	6,151	4,751	26,206	76,341
Total, current . . . . .	421,271	318,572	204,441	140,035	150,635	75,186	1,310,139
CAPITAL GRANTS							
Education . . . . .	25,641	19,900	9,642	7,285	6,094	2,579	71,141
Public health . . . . .	2,496	1,394	916	1,368	241	165	6,579
Welfare . . . . .	1,128	426	1,113	584	1,040	125	4,416
Development of resources and assistance to industry . .	4,012	1,718	3,994	1,642	6,292	68	17,726
Transport and communication—							
Roads . . . . .	57,060	38,160	39,854	21,025	34,133	9,100	199,332
Other . . . . .	..	..	..	8,582	3,253	..	11,835
Other . . . . .	5	..	..	..	119	..	124
Total, capital . . . . .	90,342	61,598	55,519	40,486	51,172	12,037	311,153
TOTAL GRANTS							
Grand total . . . . .	511,613	380,170	259,960	180,521	201,807	87,223	1,621,292



**ALL COMMONWEALTH FUNDS: TOTAL GRANTS TO THE STATES, BY FUNCTION**  
**1965-66 TO 1969-70**  
 (\$'000)

<i>Function</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
<b>CURRENT GRANTS</b>					
Education . . . . .	32,929	38,772	48,339	52,858	76,967
Welfare . . . . .	22	23	23	164	1,048
Development of resources and assistance to industry . . . . .	11,256	25,346	30,284	15,965	14,464
Not allocated to function—					
Financial assistance grants . . . . .	757,351	826,613	907,539	1,018,193	1,141,319
Other . . . . .	74,701	74,193	70,964	68,181	76,341
<b>Total, current</b> . . . . .	<b>876,259</b>	<b>964,947</b>	<b>1,057,152</b>	<b>1,155,360</b>	<b>1,310,139</b>
<b>CAPITAL GRANTS</b>					
Education . . . . .	32,074	40,091	53,958	55,402	71,141
Public health . . . . .	5,235	5,501	5,062	5,513	6,579
Welfare . . . . .	..	..	..	2,667	4,416
Development of resources and assistance to industry . . . . .	3,512	3,155	8,424	12,396	17,726
Transport and communication—					
Roads . . . . .	145,404	155,413	165,664	176,065	199,332
Other . . . . .	12,426	12,278	20,925	11,436	11,835
Other . . . . .	750	1,954	843	446	124
<b>Total, capital</b> . . . . .	<b>199,402</b>	<b>218,392</b>	<b>254,875</b>	<b>263,925</b>	<b>311,153</b>
<b>TOTAL GRANTS</b>					
<b>Grand total</b> . . . . .	<b>1,075,661</b>	<b>1,183,339</b>	<b>1,312,027</b>	<b>1,419,285</b>	<b>1,621,292</b>

Further information concerning items included in the functional classifications of the two preceding tables is given in the annual bulletin *Commonwealth Finance* 1969-70.

*Repayable advances.* The following tables show functional classifications of amounts paid to the States as repayable advances.

ALL COMMONWEALTH FUNDS: ADVANCES TO THE STATES, BY FUNCTION, 1969-70  
(\$'000)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
GROSS							
Development of resources and assistance to industry . . .	1,800	573	7,131	1,756	4,273	1,039	16,572
Transport and communication—							
Railway projects . . . . .	..	..	..	3,630	4,647	..	8,277
Other . . . . .	..	..	..	..	..	..	..
Power, fuel and light . . . . .	..	..	..	..	..	9,700	9,700
Housing . . . . .	49,711	36,733	13,989	21,250	12,373	7,635	141,691
Not allocated to function . . .	10,154	16,795	1,006	3,056	2,833	1,630	35,474
<b>Total gross advances . . .</b>	<b>61,665</b>	<b>54,101</b>	<b>22,126</b>	<b>29,692</b>	<b>24,126</b>	<b>20,004</b>	<b>211,714</b>
REPAYMENTS							
Development of resources and assistance to industry . . .	1,947	867	1,086	2,419	5,422	7,094	18,836
Transport and communication—							
Railway projects . . . . .	96	96	1,276	262	1,281	..	3,011
Other . . . . .	330	..	637	..	151	..	1,118
Power, fuel and light . . . . .	..	..	..	..	..	..	..
Housing . . . . .	5,096	4,590	1,395	1,690	1,290	506	14,567
Not allocated to function . . .	..	..	..	..	..	..	..
<b>Total repayments . . .</b>	<b>7,469</b>	<b>5,553</b>	<b>4,394</b>	<b>4,371</b>	<b>8,144</b>	<b>7,600</b>	<b>37,572</b>
NET							
Development of resources and assistance to industry . . .	-147	-294	6,045	-663	-1,149	-6,055	-2,264
Transport and communication—							
Railway projects . . . . .	-96	-96	-1,276	3,368	3,366	..	5,266
Other . . . . .	-330	..	-637	..	-151	..	-1,118
Power, fuel and light . . . . .	..	..	..	..	..	9,700	9,700
Housing . . . . .	44,615	32,142	12,594	19,560	11,083	7,129	127,124
Not allocated to function . . .	10,154	16,795	1,006	3,056	2,833	1,630	35,474
<b>Total net advances . . .</b>	<b>54,196</b>	<b>48,547</b>	<b>17,732</b>	<b>25,321</b>	<b>15,982</b>	<b>12,404</b>	<b>174,182</b>

Minus sign (—) denotes excess of repayment.

**ALL COMMONWEALTH FUNDS: TOTAL ADVANCES TO THE STATES  
BY FUNCTION, 1965-66 TO 1969-70**  
(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>GROSS</b>					
Development of resources and assistance to industry . . . . .	27,255	24,158	50,208	22,350	16,572
Transport and communication—					
Railway projects . . . . .	12,410	12,647	13,989	7,554	8,277
Other . . . . .	6,107	2,806	..	11,000	..
Power, fuel and light . . . . .	..	..	5,300	3,200	9,700
Housing . . . . .	124,242	127,753	129,943	132,899	141,691
Not allocated to function . . . . .	2,600	..	726	..	35,474
<b>Total gross advances . . . . .</b>	<b>172,615</b>	<b>167,363</b>	<b>200,166</b>	<b>177,003</b>	<b>211,714</b>
<b>REPAYMENTS</b>					
Development of resources and assistance to industry . . . . .	16,405	17,099	15,383	19,482	18,836
Transport and communication—					
Railway projects . . . . .	1,387	1,540	1,724	1,886	3,011
Other . . . . .	315	494	1,113	1,118	1,118
Power, fuel and light . . . . .	..	..	..	..	..
Housing . . . . .	10,237	11,240	12,297	13,413	14,567
Not allocated to function . . . . .	..	990	..	31,202	..
<b>Total repayments . . . . .</b>	<b>28,344</b>	<b>31,363</b>	<b>30,517</b>	<b>67,099</b>	<b>37,532</b>
<b>NET</b>					
Development of resources and assistance to industry . . . . .	10,850	7,059	34,824	2,868	—2,264
Transport and communication—					
Railway projects . . . . .	11,023	11,107	12,265	5,668	5,266
Other . . . . .	5,792	2,312	—1,113	9,882	—1,118
Power, fuel and light . . . . .	..	..	5,300	3,200	9,700
Housing . . . . .	114,005	116,513	117,646	119,486	127,124
Not allocated to function . . . . .	2,600	—990	726	—31,202	35,474
<b>Total net advances . . . . .</b>	<b>144,271</b>	<b>136,000</b>	<b>169,649</b>	<b>109,904</b>	<b>174,182</b>

Minus sign (—) denotes excess of repayments.

Further information concerning items included in the functional classifications of the two preceding tables is given in the annual bulletin *Commonwealth Finance* 1969-70.

### General purpose grants

#### Current grants

*The Financial Assistance Grants.* Details of the financial assistance grants arrangements existing in 1969-70 and prior years are given in earlier issues of the Year Book (see No. 56, page 551). Revised arrangements to apply over the five years 1970-71 to 1974-75 are embodied in the *States Grants Act* 1970-1971.

The financial assistance grants, which are the main general revenue grants to the States, will continue to increase each year in proportion to the increase in average wages in Australia as a whole in the year ending 31 March in the year of payment and to the increase in each State's population

in the year ending 31 December in the year of payment and by a further 'betterment factor'. However, this last factor will increase, beginning with the calculation of the 1971-72 grants, from 1.2 per cent to 1.8 per cent. Additional grants of \$40 million were paid in 1970-71 and distributed between the States in proportion to the other grants payable to them under the Act and these grants will increase in subsequent years under the formula. Further grants will be provided in the years 1970-71 to 1974-75 to New South Wales and Victoria (equal to two dollars per head of their population) to Queensland (by way of an annual addition of \$2 million to the base on which its grant is calculated) and to Western Australia (the amount being \$12.5 million in 1970-71 reducing by \$3 million each year down to \$0.5 million in 1974-75). Tasmania's financial assistance grant, which will also increase in subsequent years under the formula, was increased by \$10 million in 1970-71 as a transfer from its special grants (*see below*).

The States received additional financial assistance grants of \$59.71 million in 1970-71 to compensate them for the loss of receipts duty and will continue to receive such compensatory grants, increasing under the formula, in subsequent years.

Under the revised revenue assistance arrangements two new forms of assistance are being provided to the States as from 1970-71 (*see below* under Debt Charges Assistance and Capital Grants). At the Premiers' Conference held in June 1971 it was agreed that as from 1971-72, the financial assistance grants would be reduced partly to offset the transfer of payroll taxation from the Commonwealth to the States.

*Special Grants.* These grants are paid to the financially weaker States as supplements to the financial assistance grants. They are subject to annual recommendation by the Commonwealth Grants Commission. Each recommendation by the Commission for payment of a special grant consists of two parts: (i) One part is based on an estimate of the claimant State's financial need in the current financial year, and is treated as an advance payment subject to adjustment two years later when the Commission has compared in detail the audited budget results and standards of effort and of services provided in that year for both the claimant State and the States which the Commission takes as 'standard' (New South Wales and Victoria at present). (ii) The other part represents the final adjustment to the advance payment made two years earlier and is known as the completion payment. The following table shows special grants paid in the years 1966-67 to 1970-71.

**COMMONWEALTH GRANTS COMMISSION: GRANTS RECOMMENDED, 1966-67 TO 1970-71**  
(\$'000)

	1966-67	1967-68	1968-69	1969-70	1970-71
<b>South Australia—</b>					
Advance payment . . . . .	..	..	..	..	(a)5,000
Completion payment(b) . . . . .	..	..	..	..	..
<i>Total</i> . . . . .	..	..	..	..	5,000
<b>Western Australia—</b>					
Advance payment . . . . .	14,700	15,500	..	..	..
Completion payment(b) . . . . .	4,706	18	582	..	..
<i>Total</i> . . . . .	19,406	15,518	582	..	..
<b>Tasmania—</b>					
Advance payment . . . . .	19,500	19,000	18,000	22,000	22,000
Completion payment(b) . . . . .	1,166	889	-1,190	-100	1,680
<i>Total</i> . . . . .	20,666	19,889	16,810	21,900	(c)23,680
<b>Grand total</b> . . . . .	<b>40,072</b>	<b>35,407</b>	<b>17,392</b>	<b>21,900</b>	<b>28,680</b>

(a) Completion grant (positive or negative) may be recommended for 1970-71 in 1972-73 as year of review.  
 (b) Adjustment to estimated grant paid two years previously. (c) \$10,000,000 and \$13,680,000 paid as Financial Assistance Grants and Special Grants respectively.

*Debt Charges Assistance.* As part of the revised revenue assistance arrangements to apply over the five years 1970-71 to 1974-75 the Commonwealth is providing the States with grants to finance increasing portions of the interest and sinking fund charges on certain State debt amounting to \$1,000 million. The grants, which are authorised by the *States Grants (Debt Charges Assistance) Act* 1970 totalled \$11,504,000 in 1970-71 and will increase by that sum each year, up to \$57,520,000 in 1974-75.



### Capital grants

Also as part of the new revenue assistance arrangements, the Commonwealth has undertaken to pay grants to the States to finance capital works. The grants replace State borrowings and thereby relieve them of debt charges they would otherwise have had to pay. These grants totalled \$200 million in 1970-71 and will total \$209.8 million in 1971-72. The 1970-71 grants were authorised by the *States Grants (Capital Assistance) Act 1970*.

### Specific purpose payments

*Contributions under Financial Agreement.* Details of the Financial Agreement between the Commonwealth and the States are given in Year Book No. 37, pages 685-90. Under this Agreement the Commonwealth undertook to contribute \$15,169,824 per annum towards interest payable on the State loan securities for a period of 58 years from 1 July 1927. This amount is distributed among the States as follows: New South Wales, \$5,834,822; Victoria, \$4,254,318; Queensland, \$2,192,470; South Australia, \$1,407,632; Western Australia, \$946,864; Tasmania, \$533,718. In addition, under the Financial Agreement the Commonwealth agreed to make certain contributions to the National Debt Sinking Fund for redemption of State loan securities. Details of these are given on page 578 of this chapter.

*Natural disasters.* Under the States Grants (Drought Assistance) Acts, New South Wales, Victoria, Queensland, South Australia and Tasmania have been given Commonwealth financial assistance to relieve the effects of drought. In addition, the Commonwealth assists the States to meet budgetary problems arising from the effects of drought on their revenues.

The Commonwealth has provided financial assistance to Tasmania for the rehabilitation and restoration of damage caused by bushfires in February 1967 and to Western Australia for earthquake relief in the Meckering area of that State following the disaster in October 1968. Bushfire relief grants of \$100,000 to New South Wales and of \$200,000 to Victoria were made in 1968-69 and 1969-70 respectively.

*Roads.* The *Commonwealth Aid Roads Act 1969* provided for principal and supplementary grants totalling \$1,252,050,000 to be paid to the States over the five-year period commencing on 1 July 1969. Supplementary grants totalling \$52,050,000 are to be made to South Australia, Western Australia and Tasmania to assist in the transition from arrangements under the 1964 Act and the principal grant of \$1,200,000,000 is to be allocated specifically as follows: Urban-arterial and sub-arterial roads \$600,690,000; Rural-arterial roads \$186,760,000 and other rural roads \$394,550,000; and planning and research \$18,000,000. Total grants of \$1,252,050,000 payable in the five-year period from 1969-70 to 1973-74 are to be allocated on the following basis: New South Wales \$380,400,000; Victoria, \$254,400,000; Queensland, \$231,600,000; South Australia, \$129,000,000; Western Australia, \$200,400,000 and Tasmania \$56,250,000. For details of previous legislation see earlier yearbooks.

*Beef cattle roads.* The *States Grants (Beef Cattle Roads) Act 1968* provided for grants of \$39,500,000, \$9,500,000, and \$1,000,000 for Queensland, Western Australia, and South Australia respectively for a programme of beef cattle road construction over a period of seven years commencing from 1 July 1967.

*Health.* The *Tuberculosis Act 1948* provided for the reimbursement by the Commonwealth of capital and maintenance expenditure incurred by the States in the provision of facilities for the diagnosis, treatment and control of tuberculosis.

The *States Grants (Mental Health Institutions) Act 1964-1967* authorised assistance to the States amounting to one-third of their total expenditure on building and equipping approved mental health institutions during the six years ending 30 June 1970.

The *States Grants (Home Care) Act 1969*, the *States Grants (Paramedical Services) Act 1969* and the *States Grants (Nursing Homes) Act 1969* provide funds for a range of home care services, senior citizens' centres and nursing homes, mainly for aged persons. See Chapters 13, Welfare Services, and 14, Public Health.

### Education

Payments to the States for universities were first introduced in 1951-52, and details of the States Grants (Universities) Acts under which they were continued are given in earlier issues of the Year Book (see No. 51 page 923 and No. 52 page 770). The *States Grants (Universities) Act 1969* authorised grants totalling approximately \$226,800,000 for the Commonwealth share of the agreed programme

of development of State Universities for the years 1970 to 1972. (See also Chapter 20, Education, Cultural Activities, and Research.)

The Commonwealth, in the 1970-72 triennium, is meeting the full cost of a \$12.5 million dollar research programme approved by the Australian Research Grants Committee. A further \$4 million dollars, is also being made available by the Commonwealth for a special programme of research and research training at State Universities.

*Colleges of Advanced Education.* Under the States Grants (Advanced Education) Acts, the Commonwealth is providing financial assistance to the States of \$93.1 million during the 1970-72 triennium for recurrent and capital expenditures.

The *States Grants (Science Laboratories) Act* 1968 extended for the three years ending 30 June 1971 the operation of the scheme outlined in Official Year Book No. 54 page 745. A total payment of \$37.7m is provided for and not more than one-third may be authorised for payment before 30 June 1969 and two-thirds before 30 June 1970.

Grants for buildings and equipment for use in technical training in schools and colleges conducted by States only are provided for under the *States Grants (Science Laboratories and Technical Training) Act* 1964 and the *States Grants (Technical Training) Act* 1965-1966.

Under the *States Grants (Teachers College) Act* 1970 the Commonwealth provided for a maximum amount of \$30,000,000 over the three years ending 30 June 1973 for the construction and equipping of teachers colleges.

Under the *States Grants (Secondary School Libraries) Act* 1968 grants totalling \$27m are to be made to the States over the three years commencing 1 January 1969 to finance buildings and associated capital facilities for libraries in government and non-government secondary schools.

The *States Grants (Pre-school Teachers Colleges) Act* 1968 provided for capital grants totalling \$2.5m over the three financial years commencing 1968-69 for the purpose of increasing the physical capacity of approved pre-school teachers colleges.

The *States Grants (Independent Schools) Act* 1969 authorised payments to the States, for transmission to independent schools, of contributions to school running costs at rates of \$35 per primary pupil and \$50 per secondary pupil per annum as from the beginning of 1970.

#### *Railway projects*

The *Railway Agreement (New South Wales) Act* 1968 provided for a contribution of \$10m towards the cost of improving the existing railway from Parkes to Broken Hill as a work necessary to provide a uniform gauge railway across Australia.

*Other railway projects.* The Commonwealth is also continuing to provide financial assistance to South Australia and Western Australia under its railway standardisation agreements with those two States.

#### *Water resources*

*Investigation and measurement of water resources.* Commonwealth commitments under the National Water Resources Development Programme up to 30 June 1970 included further grants of up to \$12.8 million to Queensland for Bundaberg Irrigation Works, further assistance of up to \$9 million to New South Wales for flood mitigation works on various of its coastal rivers, and of \$8.2 million for additional investigation and measurement of State water resources in a three-year programme commencing in 1970-71.

*Chowilla and Dartmouth Reservoirs.* Investigations into and considerations of the feasibility and cost of alternative storage and hydro-electric facilities are being continued by contracting Governments under the River Murray Waters Agreement.

*Fairbairn Dam.* The *Queensland Grant (Maraboon Dam) Act* 1968 provided for grants to Queensland of up to \$20 million for the construction of a dam on the Nogoa River near Emerald.

*Copeton Dam.* Commonwealth grants up to \$20 million will be made to New South Wales under the *New South Wales Grant (Gwydir River Dam) Act* 1969 for the construction of a dam on the Gwydir River near Copeton.

*King River Dam.* Under the *Victoria Grant (King River Dam) Act* 1969 the Commonwealth is providing grants of up to \$4,000,000 to Victoria for the construction of a dam on the King River south of Cheshunt.

*Tailem Bend to Keith Pipeline.* The construction of a pipeline and certain associated works to carry water from Tailem Bend to Keith in South Australia is being assisted financially by provision of grants up to \$6,000,000 under the *South Australia Grant (Tailem Bend to Keith Pipeline) Act 1969*.

*Ord River Irrigation Project.* The *Western Australia (Ord River Irrigation) Act 1968* provided for financial assistance to Western Australia on the basis of grants for dam construction and interest-bearing loans in respect of the irrigation works.

*River Murray Salinity Reduction.* The *Victoria Grant (River Murray Salinity) Act 1968* provides for grants to Victoria of up to \$3,600,000 for two salinity reduction projects on the River Murray.

*Blowering Reservoir, New South Wales.* The Blowering Reservoir was constructed at the expense of the State of New South Wales mainly by the Snowy Mountains Hydro-electric Authority, and the Commonwealth is financing half the cost in the form of repayable interest-bearing loans to that State.

Under the *Western Australia (South-west Region Water Supplies) Agreement Act 1965*, the Commonwealth is providing financial assistance of up to \$10,500,000 by way of interest-bearing loans to Western Australia to accelerate works undertaken by the State to extend the comprehensive water supply scheme in the south-west portion of the state.

*Cressy-Longford Irrigation Works, Tasmania.* Grants of up to \$750,000 to Tasmania for the construction of a channel system and associated works to carry water from the tailrace of the Poatina Power Station to supply rural holdings were provided for by the *Tasmania Grant (Cressy-Longford Irrigation Works) Act 1969*.

#### *Other specific purpose payments*

*Brigalow lands.* Under the Brigalow Lands Agreement Acts Commonwealth advances to the State of Queensland for specified works associated with the production of beef cattle and other primary products in the Fitzroy River Basin and the supply of beef for export were fixed at an overall limit of \$23,000,000. Repayments over a twenty-year period commenced in 1968 in respect of advances made prior to 1 July 1967 and in 1971 in respect of advances made after 1 July 1967.

*Development of Exmouth township, Western Australia.* The Commonwealth has assisted the Western Australian Government in financing the cost of developing a township at Exmouth in connection with the United States Naval Communications Station established at North West Cape.

*Weipa development, Queensland.* Under the *Weipa Development Agreement Act 1965* the Commonwealth provided financial assistance of \$3,270,000 during 1965-66 and 1966-67 to Queensland by way of interest-bearing advances to finance harbour works carried out at Weipa on Cape York Peninsula.

*Natural gas pipeline, South Australia.* Under the *Natural Gas Pipeline (South Australia) Agreement Act 1967* the Commonwealth is providing a maximum of \$15,000,000 by way of interest-bearing loans to help finance the construction of a pipeline to transport gas from natural gas fields at Giddealpa and Moomba.

*Softwood forestry.* The *Softwood Forestry Agreement Act 1967* authorised the Commonwealth to provide assistance during the five years ending 30 June 1971 for increased planting of softwood forests. Total assistance of the order of \$20,000,000 is in the form of interest-bearing loans repayable over twenty-five years.

The *Tasmania Agreement (Hydro-Electric Power Development) Act 1968* provided for interest-bearing loans with an overall limit of \$47m to Tasmania for the financing of a five-year programme of accelerated hydro-electric development based on the commencement of development of the Gordon River area in the south west of the State.

*Aboriginal Advancement.* The *States Grants (Aboriginal Advancement) Acts 1968 and 1969* provided for the payment to the States of grants totalling \$3,650,000 in 1968-69 and \$5,320,000 in 1969-70 for Aboriginal advancement particularly in the fields of housing, education and health. A loan of \$350,000 has assisted in the development of an irrigation project at Bamaga in the far north of Cape York for the benefit of the Aborigines living in the area.



## All Commonwealth funds: receipts

## Commonwealth taxation

Taxation constitutes the main sources of Commonwealth revenue, accounting for 95.9 per cent in 1969-70. The following tables on pages 548-50 show details of taxation receipts from each source during the years 1965-66 to 1969-70 and summarised information on their proportions of the totals. For detailed information on taxes on income *See* separate section at end of this chapter, pages 579-89.

**ALL COMMONWEALTH FUNDS: TAXATION RECEIPTS, 1965-66 TO 1969-70**  
(£'000)

<i>Source of receipts</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Income tax—					
Individuals . . . . .	1,729,440	1,920,603	2,175,249	2,377,406	2,854,857
Companies . . . . .	801,105	784,544	836,664	1,006,543	1,151,364
Dividend (withholding) . . . . .	17,247	22,708	21,716	28,303	38,003
Interest (withholding) . . . . .	..	..	910	4,456	8,019
Customs . . . . .	270,871	274,873	312,220	346,264	413,559
Excise . . . . .	751,927	806,448	855,168	902,307	939,255
Sales tax . . . . .	370,005	380,657	416,626	494,090	568,668
Pay-roll tax . . . . .	161,943	172,232	184,416	205,568	230,469
Estate duty . . . . .	36,124	41,534	54,717	60,726	71,332
Gift duty . . . . .	6,195	7,658	8,543	9,376	8,553
Primary production taxes and charges . . . . .	28,836	30,524	31,348	33,408	32,822
Stevedoring industry charge . . . . .	9,531	9,758	14,259	14,480	13,801
Broadcasting listeners' and television viewers' licences . . . . .	35,445	37,835	39,182	45,125	48,389
Broadcasting stations' licence fees . . . . .	218	209	299	310	345
Television stations' licence fees . . . . .	1,620	963	1,144	1,392	1,491
Other . . . . .	2,914	3,844	4,074	4,938	6,048
<b>Total . . . . .</b>	<b>4,223,421</b>	<b>4,494,390</b>	<b>4,956,535</b>	<b>5,534,692</b>	<b>6,386,975</b>

**COMMONWEALTH TAXATION: PROPORTION OF EACH CLASS TO  
TOTAL NET COLLECTIONS, 1965-66 TO 1969-70**  
(Per cent)

<i>Type of tax</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Income taxes . . . . .	60.3	60.7	61.2	61.7	63.4
Customs . . . . .	6.4	6.1	6.3	6.3	6.5
Excise . . . . .	17.8	17.9	17.3	16.3	14.7
Sales tax . . . . .	8.8	8.5	8.4	8.9	8.9
Pay-roll tax . . . . .	3.8	3.8	3.7	3.7	3.6
Estate duty . . . . .	0.9	0.9	1.1	1.1	1.1
Gift duty . . . . .	0.1	0.2	0.2	0.2	0.1
Primary production taxes and charges . . . . .	0.7	0.7	0.6	0.6	0.5
Stevedoring industry charge . . . . .	0.2	0.2	0.3	0.3	0.2
Broadcasting listeners' and television viewers' licences . . . . .	0.8	0.8	0.8	0.8	0.8
Other . . . . .	0.1	0.1	0.1	0.1	0.1
<b>Total taxation . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>



## Customs and excise receipts

CUSTOMS DUTIES ACCORDING TO BRUSSELS TARIFF DIVISIONS, 1965-66 TO 1969-70  
(\$'000)

<i>Brussels Tariff Division</i>	<i>Source of receipts</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
1	Live animals; animal products . . . . .	1,155	1,040	911	1,164	1,208
2	Vegetable products . . . . .	1,755	1,797	1,268	1,831	2,536
3	Animal and vegetable fats and oils and their cleavage products; prepared edible fats; animal and vegetable waxes . . . . .	1,923	2,440	1,578	1,191	2,541
4	Prepared foodstuffs; beverages, spirits and vinegar; tobacco . . . . .	43,656	47,149	51,278	53,742	60,572
5	Mineral products . . . . .	19,394	9,488	5,688	5,606	8,992
6	Products of the chemical industry and allied industries . . . . .	10,420	12,340	11,438	12,995	13,999
7	Artificial resins and plastic materials, cellu- lose esters and ethers, and articles thereof; rubber, synthetic rubbers, factice and articles thereof . . . . .	11,781	12,278	15,457	16,838	19,719
8	Raw hides and skins, leather, furskins and articles thereof; saddlery and harness; travel goods, handbags and similar con- tainers; articles of gut (other than silk- worm gut) . . . . .	1,962	2,409	2,688	2,906	3,495
9	Wood and articles of wood; wood charcoal; cork and articles of cork; manufactures of straw, of esparto and of other plaiting materials; basketware and wickerwork . . . . .	6,627	6,902	8,111	7,941	8,741
10	Paper-making material; paper and paper- board and articles thereof . . . . .	6,838	7,545	8,437	9,778	10,977
11	Textiles and textile articles . . . . .	34,952	38,019	44,447	46,865	52,409
12	Footwear, headgear, umbrellas, sunshades, whips, riding-crops and parts therefor; prepared feathers and articles made there- with; artificial flowers; articles of human hair; fans . . . . .	3,193	4,362	5,760	6,658	9,727
13	Articles of stone, of plaster, of cement, of asbestos, of mica and of similar materials; ceramic products; glass and glassware . . . . .	7,272	7,346	8,343	9,418	11,379
14	Pearls, precious and semi-precious stones, precious metals, rolled precious metals, and articles thereof; imitation jewellery; coin . . . . .	1,187	1,200	1,375	1,344	1,849
15	Base metals and articles of base metal . . . . .	18,606	18,321	21,303	24,659	27,949
16	Machinery and mechanical appliances; elec- trical equipment; parts therefor . . . . .	47,052	44,813	55,172	65,506	85,255
17	Vehicles, aircraft, and parts therefor; vessels and certain associated transport equipment . . . . .	25,575	29,280	39,212	46,270	54,920
18	Optical, photographic, cinematographic measuring, checking, precision, medical and surgical instruments and apparatus; clocks and watches, musical instruments; sound recorders and reproducers; television image and sound recorders and re- producers, magnetic; parts therefor . . . . .	8,880	9,054	11,141	12,246	14,440
19	Arms and ammunition; parts therefor . . . . .	466	473	327	334	459
20	Miscellaneous manufactured articles . . . . .	8,537	8,422	8,684	9,438	11,123
21	Works of art, collector's pieces and antiques Miscellaneous . . . . .	—5	5	3	13	10
	Primage . . . . .	4,366	4,613	3,970	4,195	5,132
		5,420	5,799	5,668	5,341	6,142
	<i>Total, customs duties and primage . . . . .</i>	<i>271,010</i>	<i>275,095</i>	<i>312,258</i>	<i>346,281</i>	<i>413,573</i>
	<i>Less Remission of duty under special circumstances . . . . .</i>	<i>139</i>	<i>222</i>	<i>38</i>	<i>17</i>	<i>14</i>
	<i>Total . . . . .</i>	<i>270,871</i>	<i>274,873</i>	<i>312,220</i>	<i>346,264</i>	<i>413,559</i>

**COMMONWEALTH EXCISE REVENUE: CLASSIFICATION OF NET RECEIPTS**  
**1965-66 TO 1969-70**  
 (\$'000)

<i>Source of revenue</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Beer . . . . .	302,104	320,832	338,614	355,001	369,937
Potable spirits . . . . .	22,871	24,872	26,783	24,440	26,525
Tobacco . . . . .	18,070	17,028	16,460	15,711	14,799
Cigars and cigarettes . . . . .	199,740	200,901	214,315	225,262	230,620
Cigarette papers . . . . .	858	824	836	833	814
Petrol . . . . .	190,670	220,617	234,142	253,007	266,627
Diesel fuel . . . . .	13,597	15,480	18,256	21,520	23,852
Matches . . . . .	2,267	2,167	2,227	2,384	2,346
Playing cards . . . . .	114	112	121	127	136
Coal . . . . .	621	634	642	820	1,157
Canned fruit . . . . .	1,097	1,263	1,738	1,698	315
Miscellaneous . . . . .	-73	1,692	1,121	1,625	2,168
<i>All items . . . . .</i>	<i>751,936</i>	<i>806,423</i>	<i>855,255</i>	<i>902,428</i>	<i>939,295</i>
Diesel fuel taxation . . . . .	265	362	304	274	322
Less rebates . . . . .	241	298	356	352	355
	24	64	-52	-78	-33
Other rebates . . . . .	-33	-39	-34	-43	-7
<i>Total . . . . .</i>	<i>751,927</i>	<i>806,448</i>	<i>855,168</i>	<i>902,307</i>	<i>939,255</i>

In addition to these details of collections of customs and excise duties, further information is given in Chapter 11, Overseas Transactions.

#### Primary production taxes and charges

The following section shows current rates of charges, and receipts from, primary production and other charges during the years 1965-66 to 1969-70. Further information relating to primary production charges is given in Chapter 23, Rural Industry.

*Wool tax.* The present rate of wool tax is 1 per cent of the sale value of the wool and this rate has operated since 1 August 1970.

*Wheat export charge and wheat tax.* The *Wheat Export Charge Act* 1968 provided for an export charge on wheat and wheat products for the seasons 1968-69 to 1972-73 inclusive. The charge which may be levied is the excess of the export price over the sum of the guaranteed price and five cents per bushel, the maximum charge being 15 cents per bushel. Under the *Wheat Industry Stabilization Act* 1968-1970 to which the *Wheat Export Charge Act* is complementary, the Commonwealth Government guaranteed a return to wheatgrowers of 145 cents for the 1968-69 Pool, 145.9 cents for the 1969-70 Pool and 147.5 cents per bushel for the 1970-71 Pool for fair average quality bulk wheat, free on board vessel, on up to 200 million bushels of wheat harvested each season exported from Australia. Collections from the wheat export charge are paid into the Wheat Prices Stabilization Fund, out of which payments are made to the Australian Wheat Board, when required, for the purpose of building up the average export price for any season to the guaranteed price in respect of exports up to 200 million bushels. When the fund is exhausted (as it has been since 1961) payments will be made as necessary from the Consolidated Revenue Fund. As the return from exports has been below the guaranteed price, there have been no collections of the wheat export charge since the 1956-57 (No. 20) Pool, when \$3,178,000 was collected. The *Wheat Tax Act* 1957-1966 imposed a tax of three-tenths of a penny (0.25 cents) for each bushel of wheat delivered to the Wheat Board on or after 1 October 1965. (See also Chapter 23, Rural Industry.)

*Miscellaneous export charges.* These consist of charges levied on exports of apples and pears (*Apple and Pear Export Charges Act 1928-1968*), canned fruits (*Canned Fruits Export Charges Act 1926-1966*), dried fruits (*Dried Fruits Export Charges Act 1924-1970*), eggs (*Eggs Export Charges Act 1947-1965*) and grapes (*Wine Grapes Charges Act 1929-1969*).

*Stevedoring Industry Charge.* The rates in operation since 15 February 1971 have been as follows:

Class of Waterside Worker			Rate \$
A	..	..	17.55 per man-week
B	..	..	0.80 per man-hour
C	..	..	0.55 per man-hour

Class A waterside workers are regular waterside workers on weekly hire in permanent and non-permanent continuous ports. Class B are regular casual workers in non-permanent continuous ports and Class C are regular casual workers in non-continuous and seasonal ports and irregular workers in all ports.

*Tobacco charge.* The rates of tobacco charge currently in force are as follows:

(a) in respect of leaf sold to a manufacturer:

(i) one half cent per pound of leaf, payable by the grower or other persons who own the leaf immediately before sale, and

(ii) one cent per pound of leaf, payable by the manufacturer;

(b) in respect of leaf grown and used by grower-manufacturers:

(i) where the manufacturer grows nine-tenths of the leaf used by him—one half cent per pound of leaf.

(ii) in other cases—one cent per pound of leaf.

(See also Chapter 23, Rural Industry.)

*Dairy produce and butterfat levies.* The *Butter Fat Levy Act 1965-1966*, and the *Dairy Produce Export Charge Act 1924-1962* provide for a maximum rate of \$0.60 per hundredweight of butterfat content of specified dairy produce and for the apportionment of the proceeds between overseas marketing (40 per cent), local promotion (40 per cent), and research (20 per cent). (See also Chapter 23, Rural Industry).

*Canning-fruit charge.* The present rate of canning-fruit charge is \$0.75 per ton of fruit. This rate has operated since 1 December 1964.

*Honey levy.* The current rate of levy on honey sold for domestic consumption in Australia is four-tenths of a cent per pound.

*Livestock slaughter levy.* The present operative rate of levy for cattle is 46 cents per head of which 25 cents is for beef research, 1 cent for research into the meat processing industry and 20 cents to finance the operations of the Australian Meat Board. For sheep and lambs the levy is 3.85 cents per head and the components are 1.75 cents for sheep meat research, 0.1 cents for research into the meat processing industry and 2.00 cents for the Australian Meat Board.

*Dried Vine Fruits Contributory Charge.* This charge was discontinued after it was levied in respect of 1968 season fruits.

*Poultry industry levy.* The rates of levy for each hen kept for commercial purposes (the first twenty hens being exempt) were 4.0 cents per fortnight from 1 July 1970 to 8 June 1971, 2.0 cents per fortnight from 9 June 1971 to 30 June 1971 and 4.0 cents per fortnight from 1 July 1971.

*Meat chicken levy.* The rate of levy is 10 cents per hundred meat chickens hatched, payable by any hatchery with 20,000 chickens or more.

**COMMONWEALTH PRIMARY PRODUCTION TAXES AND CHARGES**  
**RECEIPTS, 1965-66 TO 1969-70**  
 (\$'000)

<i>Source of revenue</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Apple and pear export charge . . . . .	272	207	211	280	318
Butter fat levy . . . . .	1,812	2,120	1,936	1,956	2,189
Canned fruit export charge . . . . .	223	224	326	330	208
Canning fruit charge . . . . .	120	116	123	164	99
Dairy produce export charge . . . . .	5	..	..	..	..
Dairy produce levy . . . . .	31	..	..	..	..
Dried fruits export charge . . . . .	193	159	143	139	82
Dried vine fruits contributory charge—					
Currants . . . . .	72	52	..	25	44
Raisins . . . . .	165	..	42	..	..
Sultanas . . . . .	1,530	..	139	..	..
Egg export charge . . . . .	20	5	4	4	4
Honey levy . . . . .	101	92	96	106	103
Livestock slaughter levy—					
Cattle . . . . .	1,441	1,315	1,314	1,351	1,557
Sheep and lambs . . . . .	399	809	1,063	1,027	1,229
Chicken meat levy . . . . .	..	..	..	..	68
Poultry industry levy . . . . .	6,000	8,859	10,840	10,785	11,117
Tobacco charge . . . . .	369	239	427	313	539
Wheat tax . . . . .	591	1,081	633	1,276	788
Wine grapes charge . . . . .	288	380	357	379	449
Wool tax . . . . .	15,201	14,869	13,694	15,272	14,028
<b>Total . . . . .</b>	<b>28,836</b>	<b>30,524</b>	<b>31,348</b>	<b>33,408</b>	<b>32,822</b>

#### **Other Commonwealth taxation**

Taxes other than customs and excise duties, the various export charges and some taxes on particular commodities are assessed and collected by the Commissioner of Taxation. The Commissioner's organisation comprises a head office in Canberra and an office in each State.

Details of the purposes and rates applicable to the main forms of Commonwealth taxation, excluding customs and excise, currently imposed and of current legislation are given in the following pages. Historical information is given in Year Book No. 51, pages 905-10, and in earlier issues. Taxes on income are treated separately on pages 579-89 and customs and excise duties are dealt with in Chapter 11, Overseas Transactions. For detailed statistics relating to Commonwealth income taxes on individuals and companies, partnerships and trusts, and on estate duty, gift duty, and sales tax see the annual bulletin *Commonwealth Taxation Assessments*.

**Sales tax.** The general rate of tax levied on all goods other than those specified in the schedules to the *Sales Tax (Exemptions and Classifications) Act 1935-1967* is 15 per cent and goods subject to special rates are taxed at either 2½ per cent or 27½ per cent. Prior to 19 August 1970 these special rates were 2½ per cent and 25 per cent.

Particulars of the net amount of sales tax payable and the sales of taxable and exempt goods in each State for 1969-70 are given in the following table. The figures relate to sales during the period 1 July to 30 June. The figures for sales tax payable differ from those for net collections shown on page 548 because the latter include some adjustments in respect of earlier tax years and relate to tax payable on returns lodged during the year, which in general cover sales for the period June to May.



**COMMONWEALTH SALES TAX AND AMOUNT OF SALES: STATES AND TERRITORIES  
1969-70  
(\$'000)**

	<i>N.S.W. (including A.C.T.)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
Net sales on which sales tax was payable at—								
2½ per cent .	304,547	266,917	86,608	60,573	55,647	14,465	939	789,696
15 per cent .	851,502	551,486	238,082	145,889	154,560	32,359	5,632	1,979,510
25 per cent .	431,399	299,216	115,251	90,867	81,199	21,536	1,519	1,040,987
<i>Total net sales</i>	<i>1,587,448</i>	<i>1,117,619</i>	<i>439,940</i>	<i>297,329</i>	<i>291,406</i>	<i>68,360</i>	<i>8,090</i>	<i>3,810,193</i>
Sales of exempt goods by registered persons . . . .	4,279,318	2,611,458	1,235,082	694,597	653,861	248,494	35,859	9,758,670
<b>Total sales of taxable and exempt goods .</b>	<b>5,866,767</b>	<b>3,729,077</b>	<b>1,675,023</b>	<b>991,927</b>	<b>945,268</b>	<b>316,855</b>	<b>43,949</b>	<b>13,568,864</b>
Sales tax payable .	243,189	164,200	66,690	46,114	44 875	10,599	1,248	576,916

Sales of taxable and exempt goods and sales tax payable for Australia are shown in the following table for the years 1965-66 to 1969-70.

**COMMONWEALTH SALES TAX AND AMOUNT OF SALES  
AUSTRALIA, 1965-66 TO 1969-70  
(\$ million)**

<i>Year of sale</i>	<i>Net sales on which sales tax was payable</i>	<i>Sales of exempt goods by registered persons</i>	<i>Total sales of taxable and exempt goods</i>	<i>Sales tax payable</i>
1965-66 . . .	2,645	7,112	9,757	367
1966-67 . . .	2,838	7,802	10,640	386
1967-68 . . .	3,095	8,394	11,489	424
1968-69 . . .	3,367	8,933	12,300	498
1969-70 . . .	3,810	9,759	13,569	577

In the foregoing tables, sales include goods transferred to stock for sale by retail, goods imported by persons other than registered taxpayers, and goods used in the business of the taxpayer. Exempt sales relate to goods exempted from sales tax under the *Sales Tax (Exemptions and Classifications) Act 1935-1967*. The figures shown do not represent the total sales of all commodities, as vendors trading only in exempt goods are not required to be registered, and consequently the volume of their sales is not included in the statistics above. In addition, non-taxable sales (i.e. goods sold by one registered taxpayer to another registered taxpayer) are excluded.

*Pay-roll tax* came into operation on 2 May 1941 and provided for the imposition of a tax on wages accruing after 30 June 1941. The relevant laws are *Pay-roll Tax Assessment Act 1941-1969*, *Pay-roll Tax Act 1941-1966*, and *Pay-roll Tax Regulations*. From 1 September 1957 pay-roll tax of 2½ per cent (rate unchanged since its inception) was payable by employers on all wages and salaries paid in excess of \$400 a week (\$20,800 per annum). Collections of pay-roll tax amounted to \$205,568,000 in 1968-69 and \$230,469,000 in 1969-70.

At the Premiers Conference held in June 1971 it was agreed that the States would have access to Pay-roll tax. For details see Appendix.

A rebate of payroll tax is available in certain circumstances to an employer who produces goods for export or earns export income from industrial property rights, etc., or who increases the level of annual export sales above average annual export sales in a base period. For export sales up to 30 June 1968 the base period was the two years ended 30 June 1960. From 1 July 1968 the base period is represented by the first three years of the eight years preceding the rebate year. A special formula applies in the case of a new exporter by which a person who did not export in any of the three years ended on 30 June 1961 progressively reaches the same position as an established exporter. The rebate is equivalent to 10.5 per cent of the increase in exports for the rebate year over the average annual exports in the base period.

**Estate duty.** Under the *Estate Duty Assessment Act 1941-1970* estate duty is assessed on the net value of the estate less a statutory exemption determined in accordance with the following formula: (a) where the whole of the estate passes to the widow, widower, children (including adopted children, step-children and ex-nuptial children) or grandchildren of the deceased person: (i) for qualifying estates of deceased primary producers—\$24,000; (ii) for other estates—\$20,000; decreasing by \$2 for every \$8 by which the value of the estate exceeds \$24,000 or \$20,000 as the case may be; (b) where no part of the estate passes to the relatives mentioned in (a): (i) for qualifying estates of deceased primary producers—\$12,000; (ii) for other estates—\$10,000; decreasing by \$2 for every \$8 by which the value of the estate exceeds \$12,000 or \$10,000 as the case may be; and (c) where part only of the estate passes to the relatives mentioned in (a): an amount calculated proportionately under (a) and (b) above.

As a general rule, the estate of a deceased primary producer would qualify for the higher level of statutory exemption if: (i) the death occurred on or after 25 September 1969; (ii) the deceased person was domiciled in Australia at the time of his death; (iii) during the period of five complete income tax years preceding death, more than one-half of the deceased person's gross income was derived from the carrying on by him of a primary production business in Australia; and (iv) the gross value of rural property in Australia—being land and certain other types of assets used in a primary production business such as livestock and agricultural plant—exceeded the gross value of all other property in the estate. In specified circumstances, dividends and certain other receipts from a family proprietary company in which a deceased person held shares may be treated as income derived from the carrying on by him of a primary production business and the value of the shares may be included, either wholly or in part, in the value of the estate's rural property.

Special exemptions are also allowed in respect of estates of defence personnel who die on active service or within three years of termination of their active service from injuries received or diseases contracted while on active service, and prescribed personal property held in Australia by certain United States personnel who are in Australia solely for purposes connected with projects of the United States Government.

A 'quick succession' rebate of estate duty may be allowable if the deceased was a beneficiary in an estate (upon which duty is payable or has been paid) of a person who pre-deceased him by not more than five years.

A 'rural property' rebate of part of any estate duty attributable to rural property included in the estate of a deceased primary producer may be allowable if the value of the estate (before deducting any statutory exemption) is less than \$250,000 and certain conditions are satisfied. The conditions are the same as those governing entitlements to higher levels of statutory exemptions for estates of deceased primary producers, as outlined in the explanations relating to statutory exemptions. If the value of a qualifying estate does not exceed \$140,000, the rebate is fifty per cent of any duty attributable to rural property in Australia. Rates of rebate gradually reducing from fifty per cent are applicable to estates having net values between \$140,000 and \$250,000.

The rates of duty have remained unchanged since 1941 and increase as the value of the estate for duty increases, as follows: does not exceed \$20,000, 3 per cent; \$20,001 to \$40,000, 3 per cent to 6 per cent; \$40,001 to \$240,000, 6 per cent to 26 per cent; \$240,001 to \$1,000,000, 26 per cent to 27.9 per cent; \$1,000,000 or more, 27.9 per cent.

Particulars of the number and value of dutiable estates and duty assessed, for each of the assessment years 1965-66 to 1969-70, are given in the following table.

COMMONWEALTH ESTATE DUTY ASSESSMENTS, 1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
Estates . . . . . No.	10,948	12,056	14,489	14,105	16,358
Gross value as assessed . . . \$'000	587,488	664,034	840,226	841,462	1,068,213
Deductions(a) . . . . . "	117,304	131,930	168,106	162,834	222,953
Statutory exemption . . . . . "	109,468	127,602	155,800	152,206	170,755
Dutiable value . . . . . "	360,715	404,502	516,320	526,422	674,504
Net duty assessed . . . . . "	38,410	43,817	57,711	64,045	83,379
Average dutiable value . . . \$	32,948	33,552	35,635	37,322	41,234
Average duty assessed per estate \$	3,508	3,634	3,983	4,541	5,097

(a) Debts, Exempt Estate and State Probate Succession Duties.

**Gift duty.** The *Gift Duty Act 1941-1966* and the *Gift Duty Assessment Act 1941-1967* impose a gift duty on gifts which are defined as dispositions of property made otherwise than by will, without adequate consideration in money or money's worth. There is a liability on both the donor and the donee to furnish a return, and both are jointly and severally liable for payment of the duty. However, if a return is furnished by the donor, the donee is relieved of this obligation.

Certain exemptions from duty are provided, the more important being: payments to an employees' superannuation or like fund; retiring allowances or gratuities granted to employees; gifts to organisations not carried on for the profit of any individual; gifts to the Commonwealth or a State; and small gifts not exceeding \$100.

The rate of gift duty applicable to any particular gift is fixed by reference to the total value of all gifts made by the same donor within the period of eighteen months before and eighteen months after the time of making that gift. Where the total value of all gifts as defined does not exceed \$4,000 no duty is payable; The present rates of duty are (a) \$4,001 to \$20,000, 3 per cent provided that the gift duty payable shall not exceed one half of the amount by which the gift exceeds \$4,000 or a proportionate amount where more than one gift is involved; (b) \$20,001 to \$40,000, 3 per cent to 6 per cent; (c) \$40,001 to \$240,000, 6 per cent to 26 per cent; (d) \$240,001 to \$1,000,000 and over, 26 per cent to 27.9 per cent.

Particulars of the number of gift duty assessments, value of gifts as assessed and duty assessed for each of the assessment years 1965-66 to 1969-70 are given in the following table.

COMMONWEALTH GIFT DUTY ASSESSMENTS, 1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
Assessments . . . No.	7,516	8,946	9,293	10,053	9,807
Value as assessed . . . \$'000	111,658	130,771	150,322	163,476	156,052
Duty assessed . . . „	5,911	7,633	8,701	9,501	8,399

#### *Australian Capital Territory Stamp Duty and Tax.*

*Stamp Duty and Tax* on a range of instruments and transactions connected with the Australian Capital Territory, including Jervis Bay, came into operation on 1 July 1969.

The Australian Capital Territory Taxation (Administration) Act 1969 provides for the administrative procedures necessary for assessment and collection of duty and tax.

Six additional Acts specify the range of dutiable instruments or transactions subject to duty or tax which are as under:

*Cheques and Other Bills of Exchange and Promissory Notes:* Five cents on each.

*Hire Purchase Agreements:* 1½ per cent of the purchase price (if over \$100) after excluding any deposit and any terms or insurance charges.

*Insurance Business:* Five per cent of premiums other than for life assurance, third party motor vehicle insurance or workers' compensation insurance.

*Sales and Purchases of Marketable Securities:* 40 cents in each \$100 or part thereof. Where the value is less than \$100 the rate is 10 cents in each \$25 or part thereof.

*Conveyances, grants and assignments of leases of land:* \$1 for each \$100 or part thereof of the value of the interest transferred where a lease is granted by a person other than the Commonwealth, in addition duty is payable at 30 cents for each \$100 or part thereof of the total rent payable for the specified period for which a lease is given.

A general exemption is provided from all duties for public hospitals, public benevolent institutions, religious institutions, public educational institutions, visiting diplomatic personnel and their families. The total amount collected as Australian Capital Territory Stamp Duty and Tax was \$1,969,000 in 1969-70 and \$2,475,000 in 1970-71.

## STATE FINANCE

### Functions of State Governments

In comparing the financial results of the States, allowances must be made for the various functions discharged by the respective State Governments and for local conditions in each case. Direct comparisons of the revenue, expenditure and debt of the individual States are difficult owing to the fact that functions which in one State are assumed by the central government are in another delegated to local government or semi-government bodies which are vested with certain defined borrowing powers and whose financial transactions are not included with those of the central government. Care is needed, therefore, in making comparisons, and the particulars contained in this chapter should be read with those contained in the chapter, Local Government.

### Accounts of State Governments

The various financial transactions of the States are in each case concerned mainly with one or other of three funds—the Consolidated Revenue Fund, the Trust Fund and the Loan Fund.



All revenue (except certain items paid into special funds) collected by a State is paid into its *Consolidated Revenue Fund*, from which payments are made under authority of an annual Appropriation Act passed by the legislature, or by a permanent appropriation under a special Act. Figures relating to New South Wales represent the transactions of the Consolidated Revenue Fund and the business undertakings included in the annual budget papers. These undertakings are: railways, omnibuses, and Sydney Harbour Trust Section of the Maritime Services Board. Adjustments have been made to the Budget figures, however, in order to eliminate duplications caused by inter-fund payments. Particulars for all other States relate to the transactions of the Consolidated Revenue Fund.

The *Trust Fund* comprises all moneys held in trust by the Government and includes such items as superannuation funds, road funds, insurance companies' deposits, etc.

The *Loan Fund* is debited with all loan moneys raised for the State and credited with the expenditure therefrom on public works or other purposes.

### Inter-relation of Commonwealth and State finances

A statement in some detail, covering the inter-relation of Commonwealth and State finances during the period from the inception of federation to the passing of the *Financial Agreement Act* 1928, was published in Year Book No. 22, pages 379-80. Changes in the financial relations between the Commonwealth and States since the passing of the Financial Agreement Act have been described in issues of the Year Book from year to year.

### State Consolidated Revenue Fund: expenditure

The principal heads of State expenditure from Consolidated Revenue Funds are: (a) interest, exchange and debt redemption charges in connection with debt; (b) working expenses of business undertakings; (c) education; (d) health and charitable expenditure; (e) justice; (f) police; (g) penal establishments; and (h) all other expenditure, including expenditure on public works, lands and surveys, agriculture and forestry, legislative and general administration, pensions, and miscellaneous.

In 1969-70 education constituted 27.0 per cent of the total expenditure from the State Consolidated Revenue Funds; the working expenses of railways, tramways, and omnibuses, 18.1 per cent; debt charges, 16.6 per cent; charitable, public health and hospitals, 14.1 per cent; and law, order and public safety, 6.2 per cent.

### Total expenditure

The total expenditure from the Consolidated Revenue Funds of the several States and the expenditure per head of population during each of the years 1965-66 to 1969-70 are shown in the following table.

STATE CONSOLIDATED REVENUE FUND EXPENDITURE, 1965-66 TO 1969-70								
Year		N.S.W.(a)	Vic.	Qld	S.A.	W.A.	Tas.	Total
EXPENDITURE								
(\$'000)								
1965-66	.	776,314	516,689	298,022	235,650	206,665	86,917	2,120,259
1966-67	.	833,832	559,595	323,523	250,717	228,174	94,414	2,290,254
1967-68	.	887,618	604,122	356,249	267,404	249,909	103,302	2,468,603
1968-69	.	970,330	666,645	388,777	286,895	276,137	110,350	2,699,134
1969-70	.	1,080,782	742,282	444,618	320,904	318,901	120,904	3,028,390
PER HEAD OF POPULATION								
(\$)								
1965-66	.	184.41	161.77	179.52	217.81	246.82	235.17	186.76
1966-67	.	195.15	172.19	191.65	227.10	264.67	252.51	198.28
1967-68	.	204.21	182.96	207.39	239.14	280.01	272.28	209.98
1968-69	.	219.03	198.65	221.97	252.64	297.27	286.10	225.16
1969-70	.	238.63	217.07	248.99	277.81	330.40	309.38	247.30

(a) See text above and page 557 for transactions included.



## Details of expenditure

The following tables show the total expenditure and expenditure per head of population for each of the principal items. For further information on the finances of the various types of business undertakings in the States *see* the chapters, Transport, Communication and Travel, and Local Government of this Year Book.

## STATE CONSOLIDATED REVENUE FUND EXPENDITURE: DETAILS, 1969-70

	<i>N.S.W.(a)</i>	<i>Vic.(b)</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.(c)</i>	<i>Total</i>
EXPENDITURE (\$'000)							
Debt (interest, exchange, debt redemption, etc.) . . . . .	135,834	130,511	69,964	77,271	52,437	36,534	502,551
Railways . . . . .	203,625	111,268	104,078	35,207	57,181	1,200	512,559
Tramways and omnibuses . . . . .	33,856	..	..	..	934	1,011	35,801
Harbours and rivers, etc. . . . .	19,117	1,774	..	3,596	3,356	44	27,887
Water supply, sewerage, irrigation and drainage . . . . .	..	11,971	..	14,205	13,659	896	40,731
Other business and industrial undertakings . . . . .	..	377	247	989	4,372	87	6,071
Education . . . . .	296,907	236,523	102,732	82,826	70,460	29,720	819,168
Health and charitable . . . . .	148,499	105,923	64,192	41,849	50,630	17,186	428,279
Justice . . . . .	18,410	6,815	6,087	2,490	3,421	1,398	38,621
Police . . . . .	44,222	29,958	18,453	10,174	9,728	4,098	116,632
Penal establishments . . . . .	11,813	4,497	2,685	2,636	3,461	1,037	26,129
Public safety . . . . .	2,651	175	1,877	504	751	543	6,500
All other expenditure . . . . .	165,848	102,491	74,304	49,158	48,510	27,150	467,460
<b>Total . . . . .</b>	<b>1,080,782</b>	<b>742,282</b>	<b>444,618</b>	<b>320,904</b>	<b>318,901</b>	<b>120,904</b>	<b>3,028,390</b>

PER HEAD OF POPULATION  
(\$)

Debt (interest, exchange, debt redemption, etc.) . . . . .	29.99	38.17	39.18	66.90	54.33	93.49	41.04
Railways . . . . .	44.96	32.54	58.28	30.48	59.24	3.07	41.86
Tramways and omnibuses . . . . .	7.48	..	..	..	0.97	2.59	2.92
Harbours and rivers, etc. . . . .	4.22	0.52	..	3.11	3.48	0.11	2.28
Water supply, sewerage, irrigation and drainage . . . . .	..	3.50	..	12.30	14.15	2.29	3.33
Other business and industrial undertakings . . . . .	..	0.11	0.14	0.86	4.53	0.22	0.50
Education . . . . .	65.55	69.17	57.53	71.70	73.00	76.05	66.89
Health and charitable . . . . .	32.79	30.98	35.95	36.23	52.46	43.98	34.97
Justice . . . . .	4.06	1.99	3.41	2.16	3.54	3.58	3.15
Police . . . . .	9.76	8.76	10.33	8.81	10.08	10.49	9.52
Penal establishments . . . . .	2.61	1.32	1.50	2.28	3.59	2.65	2.13
Public safety . . . . .	0.59	0.05	1.05	0.44	0.78	1.39	0.53
All other expenditure . . . . .	36.62	29.97	41.61	42.56	50.26	69.47	38.17
<b>Total . . . . .</b>	<b>238.63</b>	<b>217.07</b>	<b>248.99</b>	<b>277.81</b>	<b>330.40</b>	<b>309.38</b>	<b>247.30</b>

(a) *See* page 556 for transactions included. (b) An amount of \$23,310,000 interest and debt redemption paid by Victoria to the Commonwealth under Commonwealth—State Housing Agreements is included in the item All other expenditure. (c) Tasmanian transport services are under the separate control of semi-government authorities. Figures shown for relevant items represent payments to the authorities.

**TOTAL STATE CONSOLIDATED REVENUE FUND EXPENDITURE: DETAILS**  
1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
Debt (interest, exchange, debt redemption, etc.) . . . . .	370,551	397,077	425,108	456,411	502,551
Railways, tramways and omnibuses (working expenses) . . . . .	451,226	467,200	489,570	516,909	548,360
Harbours and rivers, etc. . . . .	19,445	20,580	23,629	25,697	27,887
Water supply, sewerage, irrigation and drainage . . . . .	27,301	29,269	32,967	35,963	40,731
Other business and industrial undertakings . . . . .	5,235	5,183	5,965	6,183	6,071
Education . . . . .	499,733	552,836	620,987	704,068	819,168
Health and charitable . . . . .	285,587	309,569	330,947	372,094	428,279
Justice . . . . .	26,286	29,029	32,277	34,127	38,621
Police . . . . .	77,102	87,616	94,448	101,947	116,632
Penal establishments . . . . .	15,258	17,436	19,924	22,798	26,129
Public safety . . . . .	4,400	4,644	5,143	6,258	6,500
All other expenditure . . . . .	338,135	369,814	387,639	416,680	467,460
<b>Total . . . . .</b>	<b>2,120,259</b>	<b>2,290,254</b>	<b>2,468,603</b>	<b>2,699,134</b>	<b>3,028,390</b>

**State Consolidated Revenue Fund: receipts**

The principal sources of State revenue are: (a) taxation; (b) the business undertakings controlled by the State Governments; (c) sale of and rental from Crown lands; (d) interest on advances; (e) payments by the Commonwealth Government under the Financial Agreements, Special Grants and Financial Assistance Acts, etc.; (f) Commonwealth National Welfare Fund payments; and (g) miscellaneous sources, comprising fines, fees, etc.

Of these sources, that yielding the largest revenue to the Consolidated Revenue Funds for the States as a whole in the year 1969-70 was Commonwealth payments under financial assistance and other grants (41.1 per cent of the total revenue). Next in magnitude was the group of business undertakings (22.9 per cent), the principal contributors being the Government railways and tramways, followed by taxation receipts (21.1 per cent). More than one-quarter of the total State taxation collections are not paid into Consolidated Revenue Funds, however, but into trust and other funds (see page 561). Of the remaining sources of revenue, interest (n.e.i.) constituted 4.1 per cent, land revenue 2.8 per cent, and National Welfare Fund payments 1.0 per cent.

**Total receipts**

The following table shows particulars of the total receipts and the receipts per head of population of the Consolidated Revenue Funds of the several States.

**STATE CONSOLIDATED REVENUE FUND RECEIPTS, 1965-66 TO 1969-70**

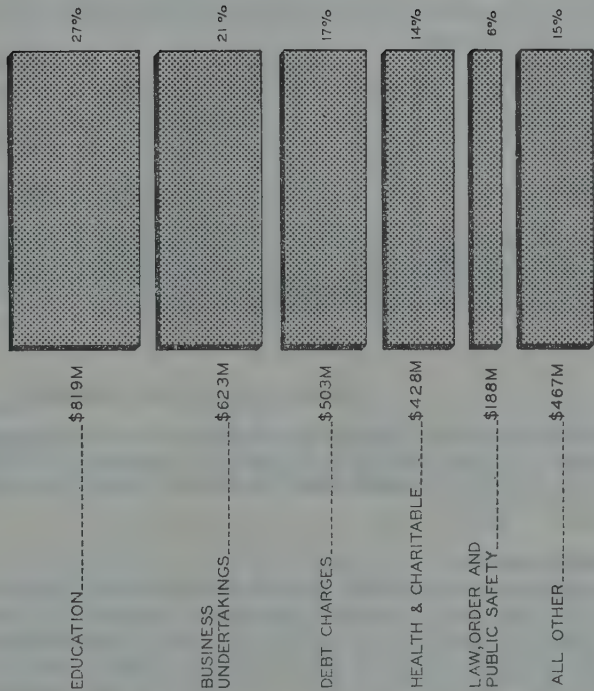
Year	N.S.W.(a)	Vic.	Qld	S.A.	W.A.	Tas.	Total
RECEIPTS (\$'000)							
1965-66 . . . . .	771,627	508,554	294,502	228,816	206,655	84,896	2,095,051
1966-67 . . . . .	830,685	559,595	323,781	250,823	228,146	93,842	2,286,873
1967-68 . . . . .	888,077	601,328	357,219	264,544	250,738	101,452	2,463,357
1968-69 . . . . .	966,743	664,183	387,866	287,355	275,081	106,656	2,687,884
1969-70 . . . . .	1,076,381	726,900	441,074	323,824	318,189	123,719	3,010,086
PER HEAD OF POPULATION (\$)							
1965-66 . . . . .	183.30	159.22	177.40	211.49	246.81	229.70	184.54
1966-67 . . . . .	194.42	172.19	191.80	227.19	264.64	250.98	197.99
1967-68 . . . . .	204.31	182.11	207.95	236.58	280.94	267.40	209.53
1968-69 . . . . .	218.22	197.92	221.45	253.04	296.14	276.53	224.22
1969-70 . . . . .	237.65	212.57	247.00	280.34	329.66	316.58	245.81

(a) See page 556 for transactions included.

STATE CONSOLIDATED REVENUE FUNDS

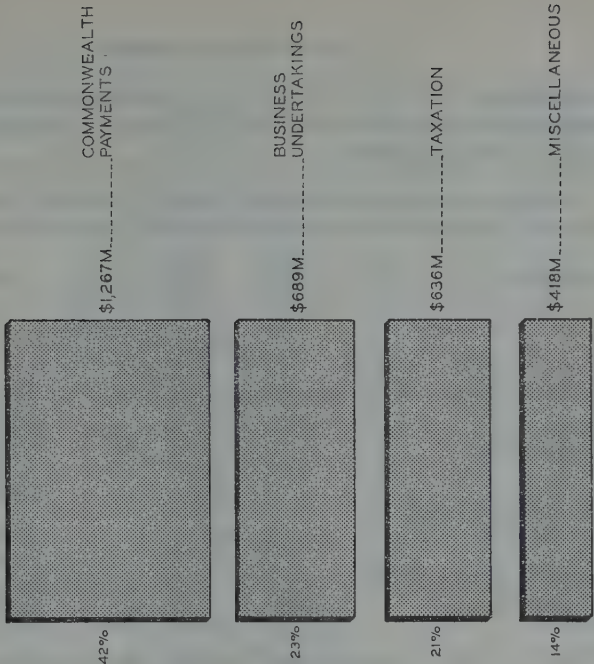
1969-70

EXPENDITURE



TOTAL EXPENDITURE -- \$3,028 MILLION

RECEIPTS



TOTAL RECEIPTS -- \$3,010 MILLION

## Sources of revenue

Classifying the revenue of the several States in the manner indicated on page 558, particulars for the year 1969-70 were as follows.

## STATE CONSOLIDATED REVENUE FUND RECEIPTS, BY SOURCE, 1969-70

Source of revenue	N.S.W. (a)	Vic.	Qld	S.A.	W.A.	Tas. (b)	Total
RECEIPTS (\$'000)							
Taxation(c)	245,432	191,049	71,591	56,460	52,472	19,287	636,289
Business undertakings	304,537	139,490	106,173	71,229	66,961	262	688,652
Lands	27,893	12,293	16,137	3,031	23,633	2,309	85,297
Interest, n.e.i.	12,725	29,399	19,751	24,846	16,658	19,727	123,105
Commonwealth payments(d)—							
Financial assistance	373,908	280,008	176,522	125,706	138,835	46,340	1,141,319
Other(e)	12,653	18,052	26,335	10,681	2,491	24,967	95,179
Commonwealth National Welfare							
Fund payments(f)	17,828	5,028	2,137	3,999	226	1,463	30,681
Miscellaneous	81,405	51,583	22,429	27,873	16,912	9,362	209,564
Total	1,076,381	726,900	441,074	323,824	318,189	123,719	3,010,086

## PER HEAD OF POPULATION

(\$)

Taxation(c)	54.19	55.87	40.09	48.88	54.36	49.35	51.96
Business undertakings	67.24	40.79	59.46	61.66	69.38	0.67	56.24
Lands	6.16	3.59	9.04	2.62	24.49	5.91	6.97
Interest, n.e.i.	2.81	8.60	11.06	21.51	17.26	50.48	10.05
Commonwealth payments(d)—							
Financial assistance	82.55	81.88	98.85	108.83	143.84	118.58	93.20
Other(e)	2.79	5.28	14.75	9.25	2.58	63.89	7.77
Commonwealth National Welfare							
Fund payments(f)	3.94	1.47	1.20	3.46	0.23	3.74	2.51
Miscellaneous	17.97	15.08	12.56	24.13	17.52	23.96	17.11
Total	237.65	212.57	247.00	280.34	329.66	316.58	245.81

(a) See page 556 for transactions included. (b) Tasmanian transport services are under the separate control of semi-government authorities. (c) In all States certain taxation collections are not paid into Consolidated Revenue Fund. For total collections see next page. (d) Excludes Commonwealth payments paid to trust funds. (e) Includes payments under Financial Agreement, special grants, additional financial assistance, grants to universities, etc. (f) Consolidated Revenue Fund receipts only. Excludes payments to Trust Funds.

## State receipts from taxation

In the tables on taxation collections in these paragraphs the collections have been grouped according to the nature of the tax rather than the method of collection. For example, stamp duties on betting tickets and bookmakers' licences have been included under Racing instead of under Stamp duties and Licences respectively.

## Net taxation collections

The following tables show, for the year 1969-70, details of the collections by each State from the various types of tax in operation, irrespective of whether such moneys have been paid into the Consolidated Revenue Funds or not. For this reason the particulars hereunder differ from those shown in the tables relating to the Consolidated Revenue Funds and present a comprehensive statement of all taxation collections in each State. For local government taxation collections, see Chapter 19, Local Government.



**STATE GOVERNMENT RECEIPTS FROM TAXATION: NET COLLECTIONS, BY TYPE OF TAX**  
**1969-70**  
**(\$'000)**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas</i>	<i>Total</i>
Probate and succession duties . . . . .	55,424	44,423	15,913	8,923	9,399	3,263	137,345
Land tax . . . . .	32,544	22,436	5,037	7,595	6,737	2,633	76,982
Liquor taxes . . . . .	16,445	11,370	5,701	3,090	3,262	1,135	41,003
Lottery taxes(a) . . . . .	18,042	6,504	4,338	..	..	..	28,884
Poker machines tax . . . . .	30,425	..	..	..	..	..	30,425
Racing taxes . . . . .	21,463	19,444	7,392	2,562	4,553	210	55,624
Vehicle registration fees and taxes	46,895	48,832	23,372	13,389	8,075	5,150	145,713
Drivers', etc., licences and fees . . . . .	8,551	3,442	1,536	1,107	1,562	545	16,743
Stamp duty (vehicle registration) . . . . .	4,718	6,688	3,078	2,378	1,978	363	19,201
Road transport taxes . . . . .	5,590	1,887	6,967	41	918	364	15,767
Road maintenance contributions . . . . .	15,872	8,555	4,754	2,839	3,624	..	35,644
Motor car third party insurance surcharges and duties . . . . .	..	2,735	..	937	816	222	4,710
Fire Brigades contributions from insurance companies . . . . .	753	..	4,864	..	..	..	5,617
Stamp duties, n.e.i. . . . .	105,027	80,417	24,757	18,243	23,934	5,240	257,618
Licence and registration fees, n.e.i. . . . .	1,720	1,966	635	746	679	73	5,820
Other taxes . . . . .	357	9,712	4,255	..	2,550	89	16,963
<b>Total . . . . .</b>	<b>363,826</b>	<b>268,412</b>	<b>112,599</b>	<b>61,849</b>	<b>68,087</b>	<b>19,287</b>	<b>894,060</b>
<i>of which—</i>							
Paid to Consolidated Revenue Fund . . . . .	245,432	191,049	71,591	56,460	52,472	19,287	636,289
Paid to Trust and other funds . . . . .	118,394	77,364	41,008	5,389	15,615	..	257,769

(a) Includes profits of State lotteries.

In addition to the collections detailed above, the taxes in the following table were collected by other State authorities.

**OTHER STATE AUTHORITIES TAXATION: NET COLLECTIONS, BY TYPE OF TAX, 1969-70**  
**(\$'000)**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
Taxes paid to other government authorities—							
Fire Brigades contributions . . . . .	8,825	7,254	..	1,056	1,815	666	19,616
Sugar cane assessment . . . . .	..	..	735	..	..	..	735
Metropolitan improvement rate . . . . .	..	7,031	..	..	..	..	7,031
Racing taxes . . . . .	..	..	..	..	..	1,185	1,185
Vehicle registration fees and drivers' licences refunds . . . . .	..	..	..	..	..	—34	—34
Road transport taxes . . . . .	..	..	..	..	..	80	80
Licence and registration fees, n.e.i. . . . .	..	..	..	..	..	8	8
Profits of State Lotteries . . . . .	(a)	..	(a)	1,817	1,745	..	3,562
<b>Total . . . . .</b>	<b>8,825</b>	<b>14,285</b>	<b>735</b>	<b>2,873</b>	<b>3,560</b>	<b>1,905</b>	<b>32,183</b>

(a) Excludes profits from State lotteries. See footnote (a) previous table.

The table hereunder shows, for the year 1969-70, the proportions of collections under individual classes of tax to total State taxation revenue.

ALL STATE AUTHORITIES RECEIPTS FROM TAXATION: PROPORTIONS OF INDIVIDUAL TAXES TO TOTAL, 1969-70  
(Per cent)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Probate and succession duties .	14.87	15.71	14.04	13.79	13.12	15.40	14.83
Land tax . . . . .	8.73	7.94	4.44	11.73	9.40	12.42	8.31
Liquor taxes . . . . .	4.42	4.02	5.03	4.77	4.55	5.36	4.43
Lottery(a), poker machines, racing taxes . . . . .	18.77	9.18	10.35	6.77	8.79	6.58	12.92
Vehicle registration fees and taxes	12.58	17.27	20.62	20.69	11.27	26.71	17.54
Drivers', etc., licences and fees .	2.29	1.22	1.36	1.71	2.18		
Stamp duty (vehicle registration) .	1.27	2.37	2.72	3.67	2.76	1.71	2.07
Road transport taxes and road maintenance contributions .	5.76	3.69	10.34	4.45	6.34	2.10	5.56
Motor car third party insurance surcharges and duties . . .	..	0.97	..	1.45	1.14	1.05	0.51
Stamp duties, n.e.i. . . . .	28.18	28.45	21.84	28.19	33.41	24.73	27.81
Other taxes, etc. . . . .	3.12	9.18	9.25	2.78	7.04	3.94	6.02
Total . . . . .	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(a) Includes profits of State Lotteries.

The total amounts and the amounts per head raised from all sources of State taxation during the years 1965-66 to 1969-70 are shown in the following tables.

ALL STATE AUTHORITIES RECEIPTS FROM TAXATION: NET COLLECTIONS, 1965-66 TO 1969-70

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
NET COLLECTIONS (\$'000)							
1965-66 . . . . .	237,931	178,603	72,164	40,237	33,323	13,377	575,635
1966-67 . . . . .	258,324	199,247	83,434	46,140	41,895	14,784	643,824
1967-68 . . . . .	288,196	224,593	97,502	51,385	50,781	16,953	729,409
1968-69 . . . . .	324,816	266,909	103,804	57,057	60,239	18,974	831,798
1969-70 . . . . .	372,650	282,697	113,334	64,722	71,647	21,192	926,242

PER HEAD OF POPULATION  
(\$)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
1965-66 . . . . .	56.52	55.92	43.47	37.19	39.80	36.19	50.71
1966-67 . . . . .	60.46	61.31	49.42	41.79	48.60	39.54	55.74
1967-68 . . . . .	66.30	68.02	56.76	45.95	56.90	44.68	62.04
1968-69 . . . . .	73.32	79.54	59.27	50.24	64.85	49.19	69.39
1969-70 . . . . .	82.28	82.67	63.47	56.03	74.23	54.23	75.64

**ALL STATE AUTHORITIES RECEIPTS FROM TAXATION: TOTAL NET COLLECTIONS  
BY TYPE OF TAX, 1965-66 TO 1969-70**  
(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
Probate and succession duties . . . . .	94,753	106,559	119,151	134,383	137,345
Land tax . . . . .	69,497	72,736	76,103	75,129	76,982
Liquor tax . . . . .	27,403	31,226	34,299	38,427	41,003
Lottery(a), poker machines, racing taxes . . . . .	75,179	85,828	97,149	106,846	119,680
Vehicle registration fees and taxes . . . . .	106,872	115,282	124,409	136,790	145,679
Drivers', etc., licences and fees . . . . .	13,607	14,377	14,865	16,096	16,743
Stamp duty (vehicle registration) . . . . .	10,525	11,576	14,768	16,707	19,201
Road transport taxes and road maintenance contributions . . . . .	33,936	38,401	42,580	47,153	51,491
Motor car third party insurance surcharges and duties . . . . .	3,132	3,314	3,472	4,051	4,710
Stamp duties, n.e.i. . . . .	109,663	124,965	157,943	206,575	257,618
Other taxes . . . . .	31,070	39,560	44,671	49,642	55,790
<b>Total . . . . .</b>	<b>575,635</b>	<b>643,824</b>	<b>729,409</b>	<b>831,798</b>	<b>926,242</b>

(a) Includes profits of State Lotteries.

**Taxation collections paid to trust and other funds**

Details of taxation collections paid into trust and other funds and included in the foregoing table are shown below.

**STATE GOVERNMENT RECEIPTS FROM TAXATION: TOTAL PAYMENTS INTO TRUST  
AND OTHER FUNDS, 1965-66 TO 1969-70**  
(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
Liquor tax . . . . .	8,236	9,120	9,849	10,779	11,516
Racing tax . . . . .	2,192	2,836	3,723	4,938	5,876
Poker machines tax . . . . .	15,761	19,650	23,063	26,294	30,426
Profits of State Lotteries . . . . .	8,981	8,950	9,565	9,909	10,443
Motor vehicle registration . . . . .	92,384	99,782	107,924	119,032	126,376
Drivers', etc. licences . . . . .	9,708	9,729	10,131	10,881	11,373
Road transport taxes . . . . .	5,863	6,175	6,911	7,306	8,395
Road maintenance contributions . . . . .	22,851	26,339	28,929	32,705	35,644
Motor car third party insurance surcharges and duties . . . . .	..	..	..	400	937
Fire brigades contributions . . . . .	3,320	3,842	4,213	4,724	5,617
Stamp duties, n.e.i. . . . .	1,203	1,146	1,170	1,225	1,536
Licences, n.e.i. . . . .	616	681	712	832	1,022
Other taxes, etc. . . . .	5,410	5,974	7,735	8,622	8,610
<b>Total . . . . .</b>	<b>176,523</b>	<b>194,223</b>	<b>213,923</b>	<b>237,646</b>	<b>257,769</b>

**State Consolidated Revenue Fund receipts  
from business undertakings**

A considerable proportion of State gross revenue is made up of receipts from business undertakings under the control of the Governments. The most important of these are railways and tramways, harbour works, water supply and sewerage, and electricity supply. In addition, State batteries for the treatment of auriferous ores in Western Australia and various minor revenue-producing services rendered by the Governments of all States are included. For the year 1969-70 the receipts from these sources was \$688,652,000 or 22.9 per cent of the receipts from all sources.

**STATE CONSOLIDATED REVENUE FUND: RECEIPTS FROM BUSINESS  
UNDERTAKINGS, BY SOURCE, 1969-70**  
(\$'000)

<i>Source</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.(a)</i>	<i>Total</i>
Railways(b) . . . . .	247,288	105,204	105,903	34,063	57,200	..	549,658
Tramways and omnibuses . . . . .	32,249	..	..	..	..	..	32,249
Harbours, rivers, lights . . . . .	25,000	(c)3,557	..	7,244	2,297	..	38,098
Water supply, sewerage, irrigation and drainage . . . . .	..	15,393	..	27,937	5,602	33	48,965
Electricity supply . . . . .	..	14,868	270	..	..	..	15,138
Other . . . . .	..	467	..	1,986	1,862	229	4,544
<b>Total . . . . .</b>	<b>304,537</b>	<b>139,490</b>	<b>106,173</b>	<b>71,229</b>	<b>66,961</b>	<b>262</b>	<b>688,652</b>

(a) Tasmanian transport services are under the separate control of semi-government authorities. (b) The following contributions to railways revenue from Consolidated Revenue Fund are excluded—New South Wales, \$1,600,000; South Australia, \$14,674,000. (c) Includes Harbour Trust contributions, \$1,559,000.

**STATE CONSOLIDATED REVENUE FUND: RECEIPTS FROM BUSINESS UNDERTAKINGS  
1965-66 TO 1969-70**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.(a)</i>	<i>Total</i>
<b>RECEIPTS</b> (\$'000)							
1965-66 . . . . .	236,989	126,773	81,717	58,597	49,267	602	553,946
1966-67 . . . . .	257,872	140,627	85,384	61,996	56,525	246	602,650
1967-68 . . . . .	272,570	129,827	91,647	60,256	60,883	248	615,431
1968-69 . . . . .	282,148	132,802	99,558	62,120	58,999	270	635,897
1969-70 . . . . .	304,537	139,490	106,173	71,229	66,961	262	688,652

**PER HEAD OF POPULATION**  
(\$)

1965-66 . . . . .	56.30	39.69	49.22	54.16	58.84	1.63	48.79
1966-67 . . . . .	60.35	43.27	50.58	56.16	65.57	0.66	52.17
1967-68 . . . . .	62.71	39.32	53.35	53.89	68.22	0.65	52.35
1968-69 . . . . .	63.69	39.57	56.84	54.70	63.51	0.70	53.05
1969-70 . . . . .	67.24	40.79	59.46	61.66	69.38	0.67	56.24

(a) Tasmanian transport services are under the separate control of semi-government authorities.

**STATE CONSOLIDATED REVENUE FUND: TOTAL RECEIPTS FROM BUSINESS  
UNDERTAKINGS, BY SOURCE, 1965-66 TO 1969-70**  
(\$'000)

<i>Source</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Railways, tramways and omnibuses . . . . .	473,483	508,846	522,259	537,320	581,907
Harbour services . . . . .	27,142	30,010	33,348	36,382	38,098
Water supply, sewerage, irrigation and drainage . . . . .	37,370	41,206	41,790	43,919	48,965
Other . . . . .	15,951	22,588	18,035	18,275	19,682
<b>Total . . . . .</b>	<b>553,946</b>	<b>602,650</b>	<b>615,431</b>	<b>635,897</b>	<b>688,652</b>

For further information on the finances of the various types of business undertakings in the States see the chapters, Transport, Communication and Travel, and Local Government, of this Year Book.



## State Loan Funds

The principal purpose of State public borrowing is to assist in financing the development of the resources of the country, e.g. the establishment and operation of railway systems and electricity undertakings, construction of roads and water and sewerage works, and improvements to harbours and rivers.

## Gross loan expenditure

Particulars of gross loan expenditure on works, services, etc., are shown in the following tables.

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC.: DETAILS, 1969-70  
(\$'000)

	N.S.W.	Vic.(a)	Qld	S.A.	W.A.	Tas.	Total
Public works and services—							
Railways . . . . .	24,000	16,160	18,568	6,810	11,963	3,350	80,852
Tramways and omnibuses . . . . .	2,165	..	..	..	240	..	2,405
Roads . . . . .	2,085	1,778	686	1,000	..	..	..
Bridges . . . . .	..	..	..	..	..	1,123	30,015
Harbours and rivers . . . . .	12,108	2,687	1,402	5,089	2,057	..	..
Lights and lighthouses . . . . .	..	..	..	..	..	..	..
Water supply . . . . .	21,610	24,519	16	21,275	15,565	649	93,602
Sewerage . . . . .	..	1,173	..	8,795	..	..	..
Electricity and gas supplies . . . . .	16,905	19,290	2,800	6,000	4,567	23,125	72,687
Public buildings . . . . .	94,936	75,477	33,888	33,317	27,095	15,083	279,797
Loans and grants to local bodies . . . . .	1,375	3,708	16,025	..	..	42	21,151
Housing(b) . . . . .	954	1,910	1,405	589	3,322	..	8,180
Other public works, etc. . . . .	543	883	..	1,620	73	951	4,070
Primary production—							
Soldier settlement . . . . .	16	2	..	..	..	..	18
Land for settlement . . . . .	2,583	2,250	366	2	..	100	5,301
Advances to settlers . . . . .	200	..	..	1,812	..	720	2,732
Water conservation, irrigation and drainage . . . . .	21,882	(c)	8,669	3,385	755	..	34,690
Vermin-proof fencing . . . . .	..	..	60	(d)	..	..	60
Agriculture . . . . .	1,500	843	..	..	935	435	3,713
Agricultural Bank . . . . .	..	..	8,400	..	..	..	8,400
Forestry . . . . .	4,300	3,365	5,600	2,485	400	1,450	17,600
Mines and mineral resources . . . . .	..	254	1,073	391	44	69	1,831
Other . . . . .	4,022	4,884	..	593	1	453	9,952
Other purposes . . . . .	..	2,208	..	7,804	3,029	1,725	14,765
<b>Total . . . . .</b>	<b>211,184</b>	<b>161,393</b>	<b>98,958</b>	<b>100,966</b>	<b>70,045</b>	<b>49,275</b>	<b>691,821</b>
Other than works, etc. . . . .	394	3,145	1,535	623	125	38	5,860
<b>Grand total . . . . .</b>	<b>211,578</b>	<b>164,538</b>	<b>100,493</b>	<b>101,589</b>	<b>70,170</b>	<b>49,312</b>	<b>697,681</b>

(a) Expenditure from loan funds and on account of loans; includes expenditure from loan funds, from Treasurer's Advance Account, and from State Loans Repayment Fund. (b) Excludes expenditure from Commonwealth loans under Commonwealth-State Housing Agreement. (c) Included in Public works and services—Water supply. (d) Included in item Advances to settlers.

**STATE LOAN EXPENDITURE ON WORKS, SERVICES, ETC.**  
**1965-66 TO 1969-70**  
**(\$'000)**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.(a)</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
1965-66—							
Gross . . .	170,984	131,884	80,083	75,167	52,926	39,346	550,390
Repayments . . .	16,179	8,146	14,232	10,632	4,983	2,773	56,945
Net . . .	154,806	123,738	65,851	64,535	47,943	36,573	493,446
1966-67—							
Gross . . .	184,457	141,804	93,378	77,809	55,481	40,118	593,047
Repayments . . .	15,138	8,900	8,990	11,156	4,391	3,482	52,057
Net . . .	169,319	132,904	84,388	66,653	51,090	36,636	540,990
1967-68—							
Gross . . .	191,759	148,715	88,075	77,338	60,593	45,993	612,473
Repayments . . .	19,883	8,687	11,227	12,116	7,348	3,865	63,126
Net . . .	171,875	140,028	76,848	65,223	53,244	42,128	549,346
1968-69—							
Gross . . .	209,759	154,985	92,848	86,918	64,503	44,344	653,357
Repayments . . .	25,562	8,154	12,115	15,680	9,693	4,270	75,474
Net . . .	184,197	146,831	80,733	71,238	54,810	40,074	577,883
1969-70—							
Gross . . .	211,578	164,538	100,493	101,589	70,170	49,312	697,681
Repayments . . .	23,022	6,616	13,221	19,326	10,823	4,342	77,350
Net . . .	188,556	157,922	87,272	82,263	59,347	44,970	620,331

(a) See footnote (a) to previous table.

Information relating to the government securities and borrowings on issue on behalf of the States is given in the Section on Government Securities on Issue: Commonwealth and States (see pages 569-75).

## COMMONWEALTH AND STATE FINANCE

### Consolidated Revenue Fund expenditure and receipts

In the following table, aggregate expenditure and receipts of Commonwealth Consolidated Revenue Fund for each of the years 1965-66 to 1969-70 may be compared with State Consolidated Revenue Fund totals for the same years as shown in the section State Finance. The combined Commonwealth and State totals have been adjusted to exclude major duplications, but the separate Commonwealth and State figures are as shown in other divisions of this chapter. The items excluded from the total figures are: payments made by the Commonwealth to the States and included in the State Consolidated Revenue Funds on account of financial assistance grants in 1965-66 to 1969-70, interest under the Financial Agreement, special grants, special financial assistance, grants to universities, specific purpose payments, Tuberculosis Act capital expenditure, National Welfare Fund payments, and estimated payments of pay-roll tax by the States to the Commonwealth. There are other relatively minor payments for which adjustments have not been made, and the adjusted figures are therefore still slightly overstated.

### COMMONWEALTH AND STATE CONSOLIDATED REVENUE FUND EXPENDITURE AND RECEIPTS, 1965-66 TO 1969-70

<i>Year</i>	<i>Expenditure</i>			<i>Receipts</i>		
	<i>Common-wealth</i>	<i>States</i>	<i>Total</i>	<i>Common-wealth</i>	<i>States</i>	<i>Total</i>
	\$'000	\$'000	\$m	\$'000	\$'000	\$m
1965-66 . . .	4,879,201	2,120,259	6,105.4	4,879,201	2,095,051	6,080.2
1966-67 . . .	5,227,721	2,290,254	6,548.8	5,227,721	2,286,873	6,545.5
1967-68 . . .	5,760,480	2,468,603	7,179.5	5,760,480	2,463,357	7,174.2
1968-69 . . .	6,085,765	2,699,134	7,636.3	6,085,765	2,687,884	7,625.1
1969-70 . . .	6,978,750	3,028,390	8,707.0	6,978,750	3,010,086	8,688.7

**Taxation collections**

The following table shows the combined Commonwealth and State taxation collections and the amount per head of population for the years 1965-66 to 1969-70. Taxation collections by Commonwealth and State authorities (other than Local Government authorities) are included.

**COMMONWEALTH AND STATE TAXATION: TOTAL NET COLLECTIONS  
BY TYPE OF TAX, 1965-66 TO 1969-70**

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>NET COLLECTIONS</b>					
(\$'000)					
Income taxes . . . . .	2,545,399	2,725,236	3,030,918	3,410,886	4,046,928
Estate, gift, probate and succession duties . . . . .	137,072	155,751	182,412	204,484	217,230
Customs and excise duty . . . . .	1,022,798	1,081,321	1,167,388	1,248,571	1,352,814
Sales tax . . . . .	370,005	380,657	416,626	494,090	568,668
Payroll tax . . . . .	161,943	172,232	184,416	205,568	230,469
Broadcasting listeners' and television viewers' licences . . . . .	35,445	37,835	39,182	45,125	48,389
Land taxes . . . . .	69,497	72,736	76,103	75,129	76,982
Liquor taxes . . . . .	27,629	31,485	34,597	38,775	41,408
Lottery(a), poker machines and racing taxes . . . . .	75,198	85,851	97,178	106,879	119,728
Taxes on ownership and operation of motor vehicles . . . . .	168,912	183,892	201,175	222,205	239,321
Stamp duties, n.e.i. . . . .	110,012	125,325	158,314	207,044	259,681
Licences and registration fees, n.e.i. . . . .	5,969	5,605	6,280	7,090	7,822
Other taxes . . . . .	65,818	76,632	86,551	93,240	97,716
<b>Total . . . . .</b>	<b>4,795,696</b>	<b>5,134,558</b>	<b>5,681,136</b>	<b>6,359,083</b>	<b>7,307,157</b>
<i>of which</i>					
Commonwealth taxation (including Territories) . . . . .	4,220,061	4,490,734	4,951,727	5,527,285	6,380,915
State taxation . . . . .	575,635	643,824	729,409	831,798	926,242
<b>PER HEAD OF POPULATION</b>					
(\$)					
Income taxes . . . . .	221.33	232.75	254.13	280.23	325.24
Estate, gift, probate and succession duties . . . . .	11.92	13.30	15.29	16.80	17.46
Customs and excise duty . . . . .	88.93	92.35	97.88	102.58	108.72
Sales tax . . . . .	32.17	32.51	34.93	40.59	45.70
Payroll tax . . . . .	14.08	14.71	15.46	16.89	18.52
Broadcasting listeners' and television viewers' licences . . . . .	3.08	3.23	3.29	3.71	3.89
Land taxes . . . . .	6.04	6.21	6.38	6.71	6.19
Liquor taxes . . . . .	2.40	2.69	2.90	3.19	3.33
Lottery(a), poker machines and racing taxes . . . . .	6.54	7.33	8.15	8.78	9.62
Taxes on ownership and operation of motor vehicles . . . . .	14.69	15.71	16.87	18.26	19.23
Stamp duties, n.e.i. . . . .	9.57	10.70	13.27	17.01	20.87
Licences and registration fees, n.e.i. . . . .	0.52	0.48	0.53	0.58	0.63
Other taxes . . . . .	5.72	6.54	7.26	7.66	7.85
<b>Total . . . . .</b>	<b>417.00</b>	<b>438.53</b>	<b>476.34</b>	<b>522.45</b>	<b>587.25</b>
<i>of which—</i>					
Commonwealth taxation (including Territories) . . . . .	366.94	383.54	415.18	454.11	512.81
State taxation . . . . .	50.71	55.74	62.04	69.39	75.64

(a) Includes profits of State Lotteries.

## Government borrowing and financing the Commonwealth deficit

Movements in government securities on issue are the most important transactions involved in financing the Commonwealth deficit in each of the years 1965-66 to 1969-70 as shown in the table on page 530.

Specifically the deficit, as derived, consists of the following:

Net sales of Commonwealth securities (new issues, *less* redemptions, *less* net purchases from Commonwealth balances in the Trust Fund),  
*less* net purchases of other investments from Commonwealth balances in the Trust Fund,  
*plus* minor items of indebtedness (such as borrowing by Australian Capital Territory and Northern Territory housing trust accounts, and transactions associated with the issue of coin),  
*less* net additions to cash balances and funds provided for the International Monetary Fund.

The following table summarises the relationship of the deficit in each of the years 1965-66 to 1969-70 with the net movement in securities on issue which are derivable from the tables shown on the following pages.

### RECONCILIATION OF DEFICIT WITH NET MOVEMENT IN SECURITIES ON ISSUE (\$ million)

(Source; Supplement to the *Treasury Information Bulletin*, August 1970)

	1965-66	1966-67	1967-68	1968-69	1969-70
Net movement in securities on issue . . . . .	415	570	707	596	692
<i>Less</i> net increase in securities on issue held by Trust Fund(a) . . . . .	-135	10	-146	-268	-512
	280	580	561	328	180
Adjustment from face value to cash basis . . . . .	..	..	(b)103	..	(c)-18
	280	580	664	328	163
<i>Less</i> increases in net assets of Commonwealth—					
Cash balances . . . . .	..	-1	..	..	-91
International Monetary Fund . . . . .	-40	-27	-59	-5	..
Other(a) . . . . .	16	..	37	62	(d)-137
<b>Deficit . . . . .</b>	<b>255</b>	<b>552</b>	<b>642</b>	<b>385</b>	<b>7</b>

(a) Excludes investment of other than Commonwealth balances in the Trust Fund. (b) Includes adjustment of Australian currency equivalent of Sterling debt, following devaluation of Sterling. See page 19 of the white paper on 'Government Securities on Issue at 30 June 1968.' (c) Includes adjustment of Australian currency equivalent of Canadian and West German debt, following variation in the rate of exchange of the Canadian dollar and revaluation of the Deutsche Mark. (d) Includes advance to Wheat Board, \$184 million.

Under the Financial Agreement between the Commonwealth and the States in 1927 the Commonwealth Government accepted responsibility for the securities of the State Governments then on issue, and was empowered to arrange for all future borrowings on behalf of the Commonwealth and the States and to issue Commonwealth securities for all money borrowed. The Commonwealth is reimbursed by the States for interest, exchange, etc., paid on their behalf, and the securities are redeemed from the National Debt Sinking Fund to which both the Commonwealth and State Governments make contributions.

In the statistical tables relating to Government securities, details of securities on issue, annual interest liability and average rate of interest liability, except on pages 572-3, are shown in the currencies in which they are repayable or payable respectively. Australian currency equivalents for overseas loans have been calculated using International Monetary Fund par rates of exchange (and the calculated equivalent for Swiss francs) ruling at 30 June in each year shown. Rates of exchange to \$A at 30 June 1970 were as follows: £Sterling, 0.46667; United States dollars, 1.1200; Canadian dollars, 1.1525; Swiss francs, 4.8978; Netherlands guilders, 4.0544; Deutsche marks, 4.0992.

The full text of the original Financial Agreement between the Commonwealth and the States was given in Year Book No. 31, page 21, a summary of the original Agreement as affected by the subsequent Agreements in later issues up to No. 37 (see pages 685-90) and a summary of the main provisions in further issues up to No. 50 (see pages 952-3).

Summary information shown in tables on pages 576 and 577-8 includes transactions related to the raising, disbursement, management and redemption of loans required to finance State deficits and works expenditure in accordance with this agreement. On the other hand, the series excludes non-negotiable, non-interest-bearing securities issued to international institutions (International



Monetary Fund, International Development Association, Asian Development Bank, etc.) because no cash receipts or expenditure were involved when these securities were issued. Transactions with these authorities are included in Commonwealth receipts, expenditure or financing items when they occur.

For this and the following reasons, Government Securities on Issue as set out in the following tables may not be aggregated without adjustment to indicate what is sometimes described as the 'public debt' or 'net public debt' of the Commonwealth and State Governments. There are forms of debt not evidenced by the issue of securities, such as Commonwealth advances to the States for specific capital purposes including advances made under the Commonwealth and State Housing Agreements. Again, some of the securities included in the tables are held by the Governments themselves. For example, a State Government may hold temporarily, or even for long periods, securities issued by the Commonwealth Government. The Commonwealth Government itself, through such institutions as the National Debt Commission, or through the Trust Funds, holds large investments in securities issued, either directly by itself or on behalf of the States. In addition, some of the securities issued on behalf of the States and held by the Commonwealth Government represent the proceeds of overseas loans, securities for which were issued directly by the Commonwealth Government. From the point of view of the aggregate net debt of the Commonwealth and the States, it would thus involve duplication if the sum of the securities on issue were to be regarded as representing the 'net public debt'.

### Government securities on issue: Commonwealth and States

Government securities on issue, annual interest payable and average rate of interest

In the following tables details are given of government securities on issue on account of the Commonwealth and States, annual interest payable and average rates of interest.

#### GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES 30 JUNE 1970

	Currency in which repayable						Total— Australian currency equiva- lents(a)	
	Australian currency \$A'000	Sterling £Stg'000	United States dollars \$US '000	Canadian dollars \$Can '000	Swiss francs Sw fr '000	Nether- lands guilders f'000	Deutsche marks DM '000	\$A'000
For Commonwealth purposes	2,818,633	69,917	687,199	24,792	249,604	5,719	938,740	3,884,914
On account of States—								
New South Wales	2,824,216	88,918	61,986	3,824	15,833	8,307	..	3,078,698
Victoria	2,175,649	21,074	29,833	3,079	12,732	6,676	..	2,254,361
Queensland	1,188,037	11,554	22,048	1,543	6,391	3,401	..	1,235,964
South Australia	1,157,077	16,767	16,388	1,636	6,774	3,351	..	1,211,267
Western Australia	835,541	23,035	9,409	1,177	4,863	2,613	..	895,961
Tasmania	625,575	3,337	10,165	895	3,703	1,933	..	643,811
Total, States	8,806,095	164,685	149,829	12,154	50,296	26,281	..	9,320,061
Total, Commonwealth and States—								
Stock and bonds	10,289,763	231,491	264,203	23,000	290,000	32,000	850,000	11,316,125
Treasury bills, internal	1,031,300	..	..	..	..	..	..	1,031,300
Treasury notes	251,961	..	..	..	..	..	..	251,961
Treasury bills, public	..	..	..	..	..	..	..	..
International Bank loans	..	..	113,184	11,846	..	..	78,240	130,423
Loans from Export- Import Bank of the United States	..	..	48,625	..	..	..	..	43,415
Aircraft loans— Export-Import Bank	..	..	79,633	..	..	..	..	71,101
Other financial insti- tutions	..	..	39,715	2,100	9,900	..	10,500	41,864
Debentures	45,108	..	..	..	..	..	..	45,108
Loans for defence pur- poses	..	..	291,669	..	..	..	..	260,419
Balance of securities of States taken over by Commonwealth and still represented by State se- curities	..	2,397 (b)713	..	..	..	..	..	5,136 8,126
Other	6,598	..	..	..	..	..	..	..
Grand total—								
Currencies in which repayable	11,624,728	234,601	837,028	36,946	299,900	32,000	938,740	..
Australian currency equivalents(a)	11,624,728	502,714	747,347	32,057	61,232	7,893	229,006	13,204,976

(a) For rates of exchange to \$A ruling at 30 June 1970 see page 568. (b) State securities issued by the Government of Western Australia to meet the costs of acquisition of the Midland Railway Company of Western Australia Ltd.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES  
ANNUAL INTEREST PAYABLE, 30 JUNE 1970**

	Currency in which payable							Total— Australian currency equivalents(a)
	Australian currency	Sterling	United States dollars	Canadian dollars	Swiss francs	Nether- lands guilders	Deutsche marks	\$A'000
	\$A'000	£Stg'000	\$US '000	\$Can '000	Sw fr '000	f'000	DM '000	\$A'000
For Commonwealth purposes	101,472	3,894	35,857	1,164	13,580	286	61,083	160,587
On account of States—								
New South Wales . . . . .	143,776	4,177	3,241	220	712	415	..	156,060
Victoria . . . . .	111,941	1,162	1,579	177	573	334	..	116,193
Queensland . . . . .	59,563	557	1,192	89	288	170	..	61,999
South Australia . . . . .	59,300	633	871	94	305	168	..	61,621
Western Australia . . . . .	42,742	811	493	68	219	131	..	45,056
Tasmania . . . . .	31,991	166	549	51	167	97	..	32,939
Total, States . . . . .	449,313	7,507	7,925	699	2,263	1,314	..	473,868
Grand total—								
Currencies in which repayable . . . . .	550,786	11,401	43,783	1,862	15,844	1,600	61,083	..
Australian currency equivalents(a) \$A'000 . . . . .	550,786	24,431	39,092	1,616	3,235	395	14,901	634,455

**AVERAGE RATE OF INTEREST LIABILITY  
(Per cent)**

For Commonwealth purposes	3.60	5.57	5.22	4.69	5.44	5.00	6.51	4.13
On account of States—								
New South Wales . . . . .	5.09	4.70	5.23	5.75	4.50	5.00	..	5.07
Victoria . . . . .	5.15	5.51	5.29	5.75	4.50	5.00	..	5.15
Queensland . . . . .	5.01	4.82	5.41	5.75	4.50	5.00	..	5.02
South Australia . . . . .	5.13	3.78	5.31	5.75	4.50	5.00	..	5.09
Western Australia . . . . .	5.12	3.52	5.24	5.75	4.50	5.00	..	5.03
Tasmania . . . . .	5.11	4.96	5.40	5.75	4.50	5.00	..	5.12
Total, States . . . . .	5.10	4.56	5.29	5.75	4.50	5.00	..	5.08
Grand total . . . . .	4.74	4.86	5.23	5.04	5.28	5.00	6.51	4.80

(a) For rates of exchange to \$A ruling at 30 June 1970, see page 568.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES  
30 JUNE 1966 TO 1970**

	30 June—				
	1966	1967	1968	1969	1970
For Commonwealth purposes—					
Australian currency . . . . .	\$A'000	2,520,779	2,531,402	2,674,987	2,590,952
Sterling . . . . .	£Stg'000	73,398	69,262	80,442	80,033
United States dollars . . . . .	\$US'000	380,067	516,494	705,120	748,094
Canadian dollars . . . . .	\$Can'000	49,191	48,479	39,939	29,727
Swiss francs . . . . .	Sw fr'000	194,088	239,711	239,704	239,704
Netherlands guilders . . . . .	f'000	7,150	7,150	6,673	6,196
Deutsche marks . . . . .	DM'000	84,596	84,596	178,240	791,740
Total, Commonwealth—Australian currency equivalents(a)	\$A'000	3,144,518	3,275,339	3,600,291	3,682,140
On account of States—					
Australian currency . . . . .	\$A'000	6,613,686	7,145,660	7,683,494	8,224,027
Sterling . . . . .	£Stg'000	255,670	233,880	206,642	200,322
United States dollars . . . . .	\$US'000	236,610	194,770	181,073	167,277
Canadian dollars . . . . .	\$Can'000	14,690	13,852	13,006	12,804
Swiss francs . . . . .	Sw fr'000	50,296	50,296	50,296	50,296
Netherlands guilders . . . . .	f'000	32,850	32,850	30,661	28,471
Total, States—Australian currency equivalents(a)	\$A'000	7,494,623	7,934,074	8,316,544	8,830,505
Total, Commonwealth and States—Australian currency equivalents(a)	\$A'000	10,639,141	11,209,413	11,916,836	12,512,645
					13,204,976

(a) For rates of exchange to \$A ruling at 30 June 1970 see page 568.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES  
ANNUAL INTEREST PAYABLE, 30 JUNE 1966 TO 1970**

		30 June—				
		1966	1967	1968	1969	1970
AMOUNT						
<b>For Commonwealth purposes—</b>						
Australian currency . . . . .	\$A'000	91,723	91,848	96,063	91,467	101,472
Sterling . . . . .	£Stg'000	3,509	3,367	4,255	4,235	3,894
United States dollars . . . . .	\$US'000	18,955	26,577	36,848	39,118	35,857
Canadian dollars . . . . .	\$Can'000	2,275	2,244	1,878	1,404	1,164
Swiss francs . . . . .	Sw fr'000	7,973	10,537	10,537	11,437	13,580
Netherlands guilders . . . . .	f'000	357	357	334	310	286
Deutsche marks . . . . .	DM'000	4,801	4,801	10,999	50,410	61,083
<b>Total, Commonwealth—Aus-</b>						
<b>tralian currency equivalent(a) . . . . .</b>	<b>\$A'000</b>	<b>122,087</b>	<b>129,159</b>	<b>144,319</b>	<b>150,291</b>	<b>160,587</b>
<b>On account of States—</b>						
Australian currency . . . . .	\$A'000	313,379	344,583	373,064	404,927	449,313
Sterling . . . . .	£Stg'000	10,632	9,871	8,943	8,720	7,507
United States dollars . . . . .	\$US'000	11,889	10,231	9,512	8,716	7,925
Canadian dollars . . . . .	\$Can'000	845	796	748	736	699
Swiss francs . . . . .	Sw fr'000	2,263	2,263	2,263	2,263	2,263
Netherlands guilders . . . . .	f'000	1,643	1,643	1,533	1,424	1,314
<b>Total, States—Australian cur-</b>						
<b>rency equivalents(a) . . . . .</b>	<b>\$A'000</b>	<b>352,138</b>	<b>379,921</b>	<b>402,178</b>	<b>432,815</b>	<b>473,868</b>
<b>Total, Commonwealth and</b>						
<b>States—Australian currency</b>						
<b>equivalents(a) . . . . .</b>	<b>\$A'000</b>	<b>474,225</b>	<b>509,080</b>	<b>546,497</b>	<b>583,106</b>	<b>634,455</b>

**AVERAGE RATE OF INTEREST LIABILITY**  
(Per cent)

<b>For Commonwealth purposes—</b>					
Australian currency . . . . .		3.64	3.63	3.60	3.53
Sterling . . . . .		4.78	4.86	5.29	5.29
United States dollars . . . . .		4.99	5.15	5.23	5.23
Canadian dollars . . . . .		4.63	4.63	4.70	4.72
Swiss francs . . . . .		4.11	4.40	4.40	4.77
Netherlands guilders . . . . .		5.00	5.00	5.00	5.00
Deutsche marks . . . . .		5.68	5.68	6.17	6.37
<b>Total, Commonwealth—Australian currency</b>					
<b>equivalents(a) . . . . .</b>		<b>3.88</b>	<b>3.94</b>	<b>4.02</b>	<b>4.08</b>
<b>On account of States—</b>					
Australian currency . . . . .		4.74	4.82	4.86	4.92
Sterling . . . . .		4.16	4.22	4.32	4.35
United States dollars . . . . .		5.02	5.25	5.25	5.21
Canadian dollars . . . . .		5.75	5.75	5.75	5.75
Swiss francs . . . . .		4.50	4.50	4.50	4.50
Netherlands guilders . . . . .		5.00	5.00	5.00	5.00
<b>Total, States—Australian currency equi-</b>					
<b>valents(a) . . . . .</b>		<b>4.70</b>	<b>4.79</b>	<b>4.84</b>	<b>4.90</b>
<b>Total, Commonwealth and States—Aus-</b>					
<b>tralian currency equivalents(a) . . . . .</b>		<b>4.46</b>	<b>4.54</b>	<b>4.59</b>	<b>4.66</b>

(a) For rates of exchange to \$A ruling at 30 June 1970 see page 568.

**Government securities on issue and annual interest payable—Australian currency**

In the following tables, details, including per capita figures, are shown in Australian currency equivalents calculated at rates of exchange ruling at 30 June of each of the years concerned.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES  
30 JUNE 1970—AUSTRALIAN CURRENCY**

	Currency in which repayable							
	Australian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	Deutsche marks	Total
SECURITIES ON ISSUE								
(\$A'000)								
For Commonwealth pur- poses—								
Treasury Bills, internal .	1,031,300	..	..	..	..	..	..	1,031,300
Other short-term . . .	251,961	..	..	..	..	..	..	250,961
Other . . . . .	1,535,372	149,821	613,571	21,511	50,962	1,411	229,006	2,601,653
<i>Total, Commonwealth</i>	<i>2,818,633</i>	<i>149,821</i>	<i>613,571</i>	<i>21,511</i>	<i>50,962</i>	<i>1,411</i>	<i>229,006</i>	<i>3,884,914</i>
On account of States—								
New South Wales . . .	2,824,216	190,537	55,345	3,318	3,233	2,049	..	3,078,698
Victoria . . . . .	2,175,649	45,158	26,637	2,672	2,600	1,647	..	2,254,361
Queensland . . . . .	1,188,037	24,758	19,686	1,339	1,305	839	..	1,235,964
South Australia . . .	1,157,077	35,927	14,632	1,420	1,383	827	..	1,211,267
Western Australia . .	835,541	49,360	8,401	1,021	993	644	..	895,961
Tasmania . . . . .	625,575	7,151	9,076	777	756	477	..	643,811
<i>Total, States</i> . . .	<i>8,806,095</i>	<i>352,894</i>	<i>133,776</i>	<i>10,546</i>	<i>10,269</i>	<i>6,482</i>	<i>..</i>	<i>9,320,061</i>
Total, Commonwealth and States—								
Treasury Bills, internal .	1,031,300	..	..	..	..	..	..	1,031,300
Other short-term . . .	251,961	..	..	..	..	..	..	251,961
Other . . . . .	10,341,467	502,714	747,347	32,057	61,232	7,893	229,006	11,921,716
<i>Grand total</i> . . .	<i>11,624,728</i>	<i>502,714</i>	<i>747,347</i>	<i>32,057</i>	<i>61,232</i>	<i>7,893</i>	<i>229,006</i>	<i>13,204,976</i>

**PER HEAD OF POPULATION**  
(\$A)

For Commonwealth pur- poses . . . . .	224.56	11.94	48.88	1.71	4.06	0.11	18.25	309.51
On account of States—								
New South Wales .	618.40	41.72	12.12	0.73	0.71	0.45	..	674.13
Victoria .	631.76	13.11	7.73	0.78	0.75	0.48	..	654.61
Queensland .	660.31	13.76	10.94	0.74	0.73	0.47	..	686.95
South Australia .	993.45	30.85	12.56	1.22	1.19	0.71	..	1,039.98
Western Australia .	852.59	50.37	8.57	1.04	1.01	0.68	..	914.26
Tasmania .	1,593.82	18.22	23.12	1.98	1.93	1.22	..	1,640.29
<i>Total, States</i>	<i>713.21</i>	<i>28.58</i>	<i>10.83</i>	<i>0.85</i>	<i>0.83</i>	<i>0.52</i>	<i>..</i>	<i>754.82</i>
<b>Total, Commonwealth and States</b>	<b>926.15</b>	<b>40.05</b>	<b>59.54</b>	<b>2.55</b>	<b>4.88</b>	<b>0.63</b>	<b>18.25</b>	<b>1,052.05</b>

**ANNUAL INTEREST PAYABLE**  
(\$A'000)

For Commonwealth pur- poses . . . . .	101,472	8,345	32,015	1,010	2,773	71	14,901	160,587
On account of States—								
New South Wales .	143,776	8,951	2,894	191	145	102	..	156,060
Victoria .	111,941	2,490	1,410	154	117	82	..	116,193
Queensland .	59,563	1,194	1,064	77	59	42	..	61,999
South Australia .	59,300	1,356	778	82	62	41	..	61,621
Western Australia .	42,742	1,738	440	59	45	32	..	45,056
Tasmania .	31,991	356	490	44	34	24	..	32,939
<i>Total, States</i>	<i>449,313</i>	<i>16,086</i>	<i>7,076</i>	<i>606</i>	<i>462</i>	<i>324</i>	<i>..</i>	<i>473,868</i>
<b>Total, Commonwealth and States</b>	<b>550,786</b>	<b>24,431</b>	<b>39,092</b>	<b>1,616</b>	<b>3,235</b>	<b>395</b>	<b>14,901</b>	<b>634,455</b>



GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES  
30 JUNE 1970—AUSTRALIAN CURRENCY—continued

	Currency in which repayable—							
	Australian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	Deutsche marks	Total
ANNUAL INTEREST PAYABLE PER HEAD OF POPULATION (\$A)								
For Commonwealth pur- poses	8.08	0.66	2.55	0.08	0.22	0.01	1.19	12.79
On account of States—								
New South Wales	31.48	1.96	0.63	0.04	0.03	0.02	..	34.17
Victoria	32.51	0.72	0.41	0.04	0.03	0.02	..	33.74
Queensland	33.11	0.66	0.59	0.04	0.03	0.02	..	34.46
South Australia	50.91	1.16	0.67	0.07	0.05	0.04	..	52.91
Western Australia	43.61	1.77	0.45	0.06	0.05	0.03	..	45.98
Tasmania	81.51	0.91	1.25	0.11	0.09	0.06	..	83.92
Total, States	36.39	1.30	0.57	0.05	0.04	0.03	..	38.38
Total, Commonwealth and States	43.88	1.95	3.11	0.13	0.26	0.03	1.19	50.55

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES  
SECURITIES ON ISSUE AND ANNUAL INTEREST PAYABLE, 30 JUNE 1966  
TO 1970—AUSTRALIAN CURRENCY  
(\$A'000)

	30 June—				
	1966	1967	1968	1969	1970
SECURITIES ON ISSUE					
For Commonwealth purposes—					
Treasury Bills, internal . . . . .	681,500	679,500	685,000	859,200	1,031,300
Other short-term . . . . .	195,996	178,452	414,735	219,419	297,069
Other . . . . .	2,267,022	2,417,388	2,500,557	2,603,521	2,556,545
Total, Commonwealth . . . . .	3,144,518	3,275,339	3,600,291	3,682,140	3,884,914
On account of States—					
New South Wales . . . . .	2,531,928	2,666,905	2,772,812	2,931,318	3,078,698
Victoria . . . . .	1,781,544	1,893,069	1,998,614	2,130,294	2,254,361
Queensland . . . . .	977,046	1,038,902	1,094,921	1,164,870	1,235,964
South Australia . . . . .	970,473	1,027,080	1,077,035	1,145,810	1,211,267
Western Australia . . . . .	730,700	772,511	804,866	851,541	895,961
Tasmania . . . . .	502,932	535,606	568,296	606,671	643,811
Total, States . . . . .	7,494,623	7,934,074	8,316,544	8,830,505	9,320,061
Total, Commonwealth and States—					
Treasury Bills, internal . . . . .	681,500	679,500	685,000	859,200	1,031,300
Other short-term . . . . .	195,996	178,452	414,735	219,419	297,069
Other . . . . .	9,761,645	10,351,461	10,817,099	11,434,026	11,876,607
Grand total . . . . .	10,639,141	11,209,413	11,916,836	12,512,645	13,204,976

## ANNUAL INTEREST PAYABLE

For Commonwealth purposes . . . . .	122,087	129,159	144,319	150,291	160,587
On account of States—					
New South Wales . . . . .	119,668	128,128	134,301	143,739	156,060
Victoria . . . . .	85,023	91,936	98,070	105,863	116,193
Queensland . . . . .	44,493	48,904	51,970	56,158	61,999
South Australia . . . . .	45,350	48,797	51,889	55,994	61,621
Western Australia . . . . .	33,617	36,217	38,165	41,016	45,056
Tasmania . . . . .	23,987	25,941	27,776	30,046	32,939
Total, States . . . . .	352,138	379,921	402,178	432,815	473,868
Total, Commonwealth and States . . . . .	474,225	509,080	546,497	583,106	634,455

**Short-term securities on issue**

Particulars of the short-term securities (Treasury bills, Treasury notes and seasonal securities) of the Commonwealth and States in Australia at intervals from 30 June 1962 to 30 June 1966 are shown on page 814 of Year Book No. 53, and particulars at earlier dates are shown in previous issues. These securities are included in the government securities on issue as shown elsewhere. No short-term securities have been raised overseas since September 1956, when all such securities held in London were expatriated to Australia.

The Treasury bill discount rate in Australia has remained at 1 per cent since 29 July 1952.

Treasury notes with currencies of thirteen weeks (A Notes) and of twenty-six weeks (B Notes) were issued in multiples of \$1,000 with a minimum subscription of \$10,000. In 1969-70 the issue prices of A Notes varied from 98.82 per cent to 98.67 per cent and yields from 4.789 per cent to 5.407 per cent. The issue prices of B Notes varied from 97.61 per cent to 97.34 per cent and yields from 4.910 per cent to 5.480 per cent.

**Government securities on issue maturing in Australia, classified by holder**

The following table shows details of government securities maturing in Australia classified according to holder as at 30 June 1969 and 1970.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATE  
MATURING IN AUSTRALIA, BY HOLDER(a), 30 JUNE 1969 AND 1970**

*(Source: Reserve Bank of Australia Statistical Bulletin)*

Holder	30 June—			
	1969		1970	
	Amount	Proportion of total	Amount	Proportion of total
	\$ million	Per cent	\$ million	Per cent
Reserve Bank of Australia . . . . .	846	7.8	1,190	10.2
Trading banks . . . . .	1,367	12.6	1,279	11.0
Savings banks . . . . .	2,285	21.1	2,229	19.2
Other banking institutions . . . . .	12	0.2	1	..
Life assurance offices . . . . .	1,150	10.6	1,195	10.3
Fire, marine and general insurance offices . . . . .	126	1.2	128	1.1
Other private financial institutions—				
Pension and provident funds . . . . .	192	1.8	222	1.9
Friendly societies, hospitals and medical funds . . . . .	29	0.3	29	0.2
Trustee companies . . . . .	115	1.1	113	1.0
Pastoral finance companies . . . . .	37	0.3	25	0.2
Money market dealers . . . . .	524	4.8	597	5.1
Miscellaneous . . . . .	104	1.0	61	0.5
Government financial institutions—				
Insurance offices and funds . . . . .	137	1.3	149	1.3
Pension and provident funds . . . . .	195	1.8	204	1.8
Public trustees . . . . .	26	0.2	24	0.2
All other(b) . . . . .	3	..	3	..
Public authorities (excluding finance)—				
Commonwealth Government (including Commonwealth semi-governmental) . . . . .	2,067	19.1	2,577	22.2
State Government . . . . .	57	0.5	40	0.3
Local government and State semi-governmental . . . . .	233	2.2	218	1.9
Companies (excluding finance) . . . . .	183	1.7	174	1.5
Other holders—				
Marketing boards . . . . .	3	..	3	..
Farmers . . . . .	83	0.8	80	0.7
Non-profit organisations . . . . .	48	0.4	51	0.4
All other . . . . .	993	9.2	1,032	8.9
<b>Total . . . . .</b>	<b>10,815</b>	<b>100.0</b>	<b>11,625</b>	<b>100.0</b>

(a) Total stock inscribed, bonds in circulation, amounts paid up on outstanding applications, in transit claims and advance applications, Commonwealth Treasury Bills and Treasury Notes, debentures, and Savings Certificates.

(b) Includes securities held by Commonwealth Development Bank of Australia.

Government securities on issue on account of the States; local government and semi-government authority securities on issue

In some States certain public utilities, such as tramways, water supply and sewerage, harbour services, etc., are controlled by boards or trusts, which, in addition to receiving advances from the central government, raise loans by borrowing on their own behalf, while in other States these services are controlled by the central government. Direct comparisons between States of the securities on issue on account of the several States should therefore be made with caution. The table following shows for 1964-65 to 1968-69 particulars of the securities on issue on account of the States, the securities on issue by local government and semi-government authorities, and the aggregates of these.

**GOVERNMENT SECURITIES ON ISSUE ON ACCOUNT OF THE STATES  
LOCAL GOVERNMENT AND SEMI-GOVERNMENT AUTHORITY  
SECURITIES ON ISSUE, 30 JUNE 1965 TO 1969**

	<i>State</i>	<i>Local government (a)</i>	<i>Semi- govern- ment(a)</i>	<i>Total</i>
<b>SECURITIES ON ISSUE</b>				
(\$A'000)(b)				
30 June 1969—				
New South Wales . . . . .	2,931,318	671,472	749,526	4,352,316
Victoria . . . . .	2,130,294	215,641	1,664,542	4,010,477
Queensland . . . . .	1,164,870	379,742	348,686	1,893,298
South Australia . . . . .	1,145,810	47,479	182,326	1,375,615
Western Australia . . . . .	851,541	66,686	125,638	1,043,865
Tasmania . . . . .	606,671	63,280	72,521	742,472
<b>Total, 30 June 1969</b> . . . . .	<b>8,830,505</b>	<b>1,444,301</b>	<b>3,143,239</b>	<b>13,418,045</b>
1968 . . . . .	8,316,544	1,329,152	2,887,964	12,533,660
1967 . . . . .	7,934,074	1,220,628	2,688,052	11,842,754
1966 . . . . .	7,494,623	1,121,852	2,482,096	11,098,571
1965 . . . . .	7,090,533	1,035,864	2,312,824	10,439,222
<b>PER HEAD OF POPULATION</b>				
(\$A)(b)				
30 June 1969—				
New South Wales . . . . .	655.07	150.06	167.50	972.63
Victoria . . . . .	629.50	63.72	491.87	1,185.09
Queensland . . . . .	658.86	214.79	197.22	1,070.87
South Australia . . . . .	1,001.23	41.49	159.32	1,202.04
Western Australia . . . . .	899.77	70.46	132.75	1,102.98
Tasmania . . . . .	1,561.57	162.88	186.67	1,911.12
<b>Total, 30 June 1969</b> . . . . .	<b>725.35</b>	<b>118.64</b>	<b>258.19</b>	<b>1,102.17</b>
1968 . . . . .	701.60	112.13	243.63	1,057.36
1967 . . . . .	681.20	104.80	230.79	1,016.78
1966 . . . . .	654.73	98.00	216.84	969.57
1965 . . . . .	630.53	92.12	205.67	928.32

(a) Excludes amounts due to the central government. Includes bank overdrafts. (b) Overseas holdings have been converted to Australian currency at the rates of exchange current at 30 June of each year shown.

NOTE. The considerable changes in the figures for local government and semi-government debt in the table above when compared with figures in Official Year Book prior to issue No. 54 are due to the transfer of New South Wales County Councils from the semi-government division to that of local government authorities (see pages 598-600).

### Commonwealth loan transactions: summary

Under the Financial Agreement between the Commonwealth and the States, the Commonwealth is responsible for raising loan moneys to meet approved Loan Council borrowing programmes of both the Commonwealth and State Governments.

The following table indicates sources of finance for State works and housing programmes as approved by the Loan Council.

#### GOVERNMENT BORROWING: STATE WORKS AND HOUSING PROGRAMMES 1965-66 TO 1969-70 (\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
Public loans, domestic raisings, etc. . . . .	413,871	501,133	407,655	472,559	347,081
Overseas loans . . . . .	22,369	53,945	76,795	125,998	55,919
Commonwealth assistance to programmes(a)	168,760	89,922	192,550	111,443	355,000
<b>Total . . . . .</b>	<b>605,000</b>	<b>645,000</b>	<b>677,000</b>	<b>710,000</b>	<b>758,000</b>

(a) Allocated proceeds of Special Loans Nos 172, 180, 187 and 195.

#### Summary of loan transactions

The following table contains a summary of loan transactions on behalf of the Commonwealth and State Governments during the five years 1965-66 to 1969-70.

#### COMMONWEALTH LOAN TRANSACTIONS: SUMMARY, 1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>New loans(a) raised in—</b>					
Australia . . . . . \$A'000	658,725	673,696	709,665	652,288	935,127
London . . . . . £Stg'000	..	..	14,000	..	..
New York(b) . . . . . \$US'000	75,807	185,794	243,759	138,105	67,389
Canada . . . . . \$Can'000	..	..	2,050	950	..
Switzerland . . . . . Sw fr.'000	..	50,000	..	60,000	69,900
Germany . . . . . DM'000	..	..	100,000	615,000	150,000
Miscellaneous debt in Australia(c) \$A'000	6,350	29,271	18,880	20,997	-4,993
<b>Net change in short-term debt—</b>					
Australia—Public . . . . . \$A'000	-36,000	10,000	51,000	-127,000	-14,000
Internal . . . . . \$A'000	49,100	-2,000	5,500	174,200	172,100
Treasury notes . . . . . \$A'000	35,564	-27,544	185,283	-68,316	46,542
<b>Loans raised for conversion or redemption of existing securities maturing in—</b>					
Australia . . . . . \$A'000	761,000	618,268	641,766	422,484	749,700
London . . . . . £Stg'000	..	..	32,000	..	..

(a) Includes loans raised for redemption of Treasury Bills. (b) Includes proceeds of \$US17,057,000 and \$US555,000 in 1965-66 and 1966-67 from International Bank for Reconstruction and Development loan used for the purposes of the Snowy Mountains Hydro-electric Authority and proceeds of \$US100,989,000, \$US148,236,000, \$US101,519,000, and \$US57,065,000 in 1966-67, 1967-68, 1968-69 and 1969-70 under credit arrangements for defence purchases in the United States. (c) Advance loan subscriptions (net change), 'over the counter sales' (instalment stock and inscribed stock and bonds issued by State Governments), and Peace Savings Certificates (interest credited).

Minus sign (-) denotes a decrease in debt.



## National Debt Sinking Fund

## Securities on issue on behalf of the Commonwealth

The National Debt Sinking Fund was established by the *National Debt Sinking Fund Act 1923-1959* and came into operation on 11 August 1923. Particulars of the creation and operation of sinking funds by that Act are included in issues of the Year Book prior to No. 23. The *National Debt Sinking Fund Act 1966* repealed all previous legislation on sinking funds relating to securities on issue on behalf of the Commonwealth. Under the Act of 1966 the period of redemption is 25 years from 1 July 1966 for debt outstanding at 30 June 1966 and 25 years for net debt created in subsequent years.

Broadly, the amounts payable to the National Debt Sinking Fund each year are made up of contributions from the Consolidated Revenue Fund of the Commonwealth as follows:

- (a) an amount of \$30.94 million each year for a period of 25 years;
- (b) an amount equal to 4 per cent of the amount of net debt created (if any) in any year for a period of 25 years.

In addition, an amount equal to specified receipts by the Commonwealth in repayment of loans or advances made out of moneys in the Loan Fund will be paid to the Sinking Fund.

The amounts payable to the Fund in any year from Consolidated Revenue Fund are to be reduced by the following:

- (a) the net income from investments in any year; and
- (b) an amount equal to 4 per cent of the amount of the net reduction of debt in any year.

Particulars of receipts and expenditure of the Commonwealth Account for the years 1965-66 to 1969-70 are as follows.

**NATIONAL DEBT SINKING FUND: COMMONWEALTH ACCOUNT, 1965-66 TO 1969-70**  
(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>Receipts—</b>					
From Consolidated Revenue . . . . .	64,969	21,589	25,421	32,832	26,351
Loans and advances repaid . . . . .	11,659	12,684	13,772	14,909	84,069
War Service Homes money repaid . . . . .	31,045	(a)	(a)	(a)	(a)
Reparation moneys . . . . .	221	..	..	..	..
Interest on investments . . . . .	11,910	9,351	7,665	5,502	3,786
<i>Total, receipts</i> . . . . .	<i>119,804</i>	<i>43,624</i>	<i>46,859</i>	<i>53,243</i>	<i>114,206</i>
<b>Expenditure (net cost)—</b>					
Securities repurchased and redeemed in—					
Australia . . . . .	81,869	112,435	68,019	33,340	113,083
London . . . . .	6,565	9,905	5,983	693	21,386
New York(b) . . . . .	26,166	29,852	26,145	28,253	28,319
Canada . . . . .	151	131	122	28	83
Netherlands . . . . .	..	..	118	119	119
<i>Total, expenditure</i> . . . . .	<i>114,751</i>	<i>152,324</i>	<i>100,386</i>	<i>62,434</i>	<i>162,990</i>
Balance at 30 June . . . . .	302,814	194,114	140,587	131,396	82,612
Face value of securities repurchased and redeemed in—					
Australia . . . . .	82,258	112,784	68,287	33,473	114,333
London . . . . .	5,711	10,340	6,043	876	21,678
New York(b) . . . . .	12,026	29,875	26,569	29,624	29,514
Canada . . . . .	75	134	135	32	108
Netherlands . . . . .	..	..	118	118	118
<i>Total, face value</i> . . . . .	<i>100,070</i>	<i>153,133</i>	<i>101,151</i>	<i>64,123</i>	<i>165,751</i>

(a) In the years 1966-67 to 1969-70 principal repayments were credited to Consolidated Revenue Fund. (b) Includes instalment repayments of loans from International Bank for Reconstruction and Development: 1965-66—face value, \$8.7m, net cost, \$19.1m; 1966-67—face value, \$19.9m, net cost, \$20.0m; 1967-68—face value, \$20.8m, net cost, \$20.2m; 1968-69—face value, \$21.8m, net cost, \$21.1m; 1969-70—face value, \$17.6m, net cost, \$17.4m.

## Securities on issue on behalf of States

A sinking fund for the redemption of the securities on issue on behalf of States was established under the Financial Agreement. Particulars of the transactions of the National Debt Sinking Fund (States' Account) for each State during the year 1969-70 and for all States during the years 1965-66 to 1969-70 are shown in the following tables.

**NATIONAL DEBT SINKING FUND: STATES' ACCOUNT, 1969-70**  
(\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>Receipts—</b>							
Contributions under Financial Agreement—							
Commonwealth . . . . .	7,723	5,600	3,039	3,053	2,258	1,598	23,271
States . . . . .	27,539	20,881	10,534	10,781	8,887	4,861	83,484
Interest from States on cancelled securities . . . . .	73	30	20	18	24	8	173
Special contributions by States . . . . .	63	25	28	16	6	..	138
Interest on investments, etc. . . . .	269	257	64	106	73	59	828
<i>Total, receipts . . . . .</i>	<i>35,667</i>	<i>26,793</i>	<i>13,686</i>	<i>13,974</i>	<i>11,248</i>	<i>6,526</i>	<i>107,895</i>
<b>Expenditure (net cost)—</b>							
Securities repurchased and redeemed in—							
Australia . . . . .	34,481	18,414	5,669	9,999	6,749	5,972	81,284
London . . . . .	6,797	12,723	7,365	5,719	6,512	1,412	40,526
New York . . . . .	4,235	2,205	1,533	1,184	724	702	10,584
Canada . . . . .	137	109	55	59	42	31	433
Netherlands . . . . .	172	139	70	70	54	40	545
<i>Total, expenditure . . . . .</i>	<i>45,821</i>	<i>33,591</i>	<i>14,693</i>	<i>17,030</i>	<i>14,082</i>	<i>8,157</i>	<i>133,372</i>
Balance at 30 June 1970 . . . . .	1,073	3,378	1,652	1,153	182	724	8,162
<b>Face value of securities repurchased and redeemed in—</b>							
Australia . . . . .	34,536	18,435	5,669	10,006	6,749	5,972	81,367
London(a) . . . . .	7,496	12,144	7,066	5,560	6,891	1,408	40,565
New York(a) . . . . .	2,237	1,160	811	622	380	372	5,582
Canada(a) . . . . .	84	67	34	36	26	19	266
Netherlands(a) . . . . .	114	92	47	46	36	27	362
<i>Total, face value . . . . .</i>	<i>44,467</i>	<i>31,899</i>	<i>13,627</i>	<i>16,270</i>	<i>14,082</i>	<i>7,797</i>	<i>128,142</i>

(a) Converted in accordance with the Financial Agreement at the equivalent of the mint par of exchange prevailing on 1 July 1927.

**NATIONAL DEBT SINKING FUND: STATES' ACCOUNT, 1965-66 TO 1969-70**  
(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>Receipts—</b>					
Contributions under Financial Agreement—					
Commonwealth . . . . .	17,761	18,951	20,387	21,619	23,271
States . . . . .	64,385	68,867	73,486	78,807	83,484
Interest from States on cancelled securities . . . . .	106	113	93	126	173
Special contributions by States . . . . .	222	220	143	138	138
Interest on investments, etc. . . . .	30	-46	48	-220	828
<b>Total, receipts . . . . .</b>	<b>82,503</b>	<b>88,105</b>	<b>94,157</b>	<b>100,469</b>	<b>107,895</b>
<b>Expenditure (net cost)—</b>					
Securities repurchased and redeemed in—					
Australia . . . . .	60,861	59,451	50,568	45,120	81,284
London . . . . .	11,685	16,545	31,815	12,333	40,526
New York . . . . .	11,775	10,441	11,330	11,126	10,584
Canada . . . . .	782	680	631	145	433
Netherlands . . . . .	..	..	543	546	545
<b>Total, expenditure . . . . .</b>	<b>85,104</b>	<b>87,118</b>	<b>94,886</b>	<b>69,270</b>	<b>133,372</b>
<b>Balance at 30 June . . . . .</b>	<b>2,182</b>	<b>3,169</b>	<b>2,440</b>	<b>33,639</b>	<b>8,162</b>
<b>Face value of securities repurchased and redeemed in—</b>					
Australia . . . . .	60,888	59,496	50,586	45,127	81,367
London(a) . . . . .	10,002	13,579	28,953	13,543	40,565
New York(a) . . . . .	5,455	4,925	5,629	12,318	5,582
Canada(a) . . . . .	388	344	348	167	266
Netherlands(a) . . . . .	..	..	677	540	362
<b>Total, face value . . . . .</b>	<b>76,733</b>	<b>78,345</b>	<b>86,193</b>	<b>71,695</b>	<b>128,142</b>

(a) Converted in accordance with the Financial Agreement at the equivalent of the mint par of exchange prevailing on 1 July 1927.

### TAXES ON INCOME

A description of the development of income taxes in Australia appeared in Year Book No. 35, page 926. Since July 1942 the Commonwealth, under the uniform tax arrangement, has been the only authority imposing taxes on income.

The laws dealing with the assessment and imposition of Income tax at 30 June 1970 were—*Income Tax Assessment Act 1936-1969, Income Tax Act 1969, Income Tax (Partnerships and Trusts) Act 1969, Income Tax (Non-Resident Dividends and Interest) Act 1967, Income Tax (Drought Bonds) Act 1969*, and the *Income Tax Regulations*. The second-mentioned Act is an annual measure, and its primary purpose is to declare the rates of tax payable for the financial year.

Both individuals and companies are liable for income tax. Private companies are subject to tax on undistributed income in addition to the primary income tax levied on all companies.

The operation of the *Income Tax Assessment Act 1936-1970* is affected by the following Acts:

- (a) *Taxation Administration Act 1953-1966*, which provides for the administration of certain Acts relating to taxation;
- (b) *Income Tax (International Agreements) Act 1953-1969* which gives the force of law to comprehensive double taxation agreements between the Commonwealth and the Governments of the United Kingdom, the United States of America, Canada, New Zealand, Singapore and Japan. This Act also gives the force of law to an agreement with the Government of France for the avoidance of double taxation on income derived from international air transport;
- (c) *Diplomatic Privileges and Immunities Act 1967* which provides for the exemption from income tax of certain income of diplomatic representatives, their staff and families.

- (d) *International Organisations (Privileges and Immunities) Act 1963–1966*, and Regulations made under that Act, which provide for exemption from income tax of certain incomes of international organisations and their officials;
- (e) *Loan (Drought Bonds) Act 1969* which authorises the issue of drought bonds and empowers the Commissioner of Taxation to declare when drought bonds shall become redeemable.

#### **Lodgment of returns and assessment of income tax**

Individuals, partnerships and trusts, non-profit companies with total income in excess of \$416 and all other companies deriving income are required to lodge returns of income each year.

Where applicable, income tax payable is assessed and assessment notices showing the amounts payable are issued during the year following the year of income. For individuals the approximate amount payable, however, has already been collected during the income year (from employees by deductions from salary or wages and from non-employees by a provisional tax). The amount shown on the assessment notice is therefore adjusted against the amount already paid and any difference either collected or refunded.

### **Individual taxpayers**

#### **Pay-as-you-earn system**

*Salary and wage earners* are subject to tax instalment deductions by employers according to a prescribed scale which shows the amount to be deducted according to income and number of dependants. Under the group employer scheme of deduction, covering most employers of more than ten persons, the amount deducted is required to be regularly remitted to the Commonwealth Taxation Office.

Not later than 14 July each year employers are required to supply each employee with a group certificate showing amount earned and deductions made during the year ended 30 June.

Under the stamp scheme used by employers, other than group employers, a stamp deduction sheet in two parts is used. Each four weeks the employer purchases stamps (also in two parts) for the amount of deductions made each pay day and sticks one part on each half of the sheet. At the end of the year the employer gives the employee one half of the sheet and sends the other half to the Taxation Office. The employee's half is then used in the same way as a group certificate.

*Individuals with taxable income of \$400 or more from other than salary or wages* pay provisional tax in respect of that income. Collection of provisional tax for the current year is made at the same time as collection and assessment for the previous year are adjusted. The notice of assessment shows an amount of provisional tax for the current year. The provisional amount is an approximation to the tax which will be payable after the return of income for the current year has been lodged. It is ascertained by assuming that the income of the current year will be the same as that for the previous year, but the rates for the current year are applied to the income and not the rates for the year in which it was derived. The assessment notice shows the provisional tax paid in the previous year as a credit against the tax assessed on the basis of the return for that year.

#### **Assessable income**

Assessable income includes all income, other than exempt income, derived directly or indirectly from sources in Australia and, in the case of resident taxpayers, includes income from sources outside Australia.

Income includes certain other receipts declared by the Assessment Act to be assessable income. Receipts such as gifts (other than gratuities received by an employee from his employer in the course of his employment), legacies, profits from the sale of property (not acquired for the purpose of profit making by sale), lottery wins, and most capital gains are not regarded as income and are not assessable.

Certain types of income are exempt from tax, the more important being (i) war and service pensions (ii) age and invalid pensions, child endowment and other payments under the *Social Services Consolidation Act 1947–1950* and the *Tuberculosis Act 1948*, (iii) income from gold-mining and some other mining operations, (iv) twenty per cent of certain mining profits, (v) dividends paid out of exempt mining profits, (vi) income received from a scholarship, bursary or other educational allowance, (vii) income of certain non-profit institutions and mutual income of some other organisations, (viii) income of specified superannuation funds, (ix) pay, allowances and bounties for part-time duty, and gratuity payable on a call out for continuous full-time service of members of the Defence Force Emergency Reserves, and (x) pay and allowances of members of the Defence Forces while allotted for duty in special areas (i.e. part of Borneo and adjacent waters, and South Vietnam).



Expenditure incurred in producing assessable income or in carrying on a business is an allowable deduction, except to the extent that it is of a capital, private, or domestic nature, or is incurred in producing exempt income. Subscriptions to certain business associations and trade union dues are also allowable deductions.

Special deductions for both resident and non-resident taxpayers include such items as trading losses incurred in previous years, bad debts, depreciation, annual rates and land taxes paid, gifts to various institutions, certain expenditure on scientific research, and, subject to certain conditions, one-third of amounts paid as calls to mining, prospecting, oil prospecting, or afforestation companies operating in Australia. In lieu of the one-third deduction for calls, capital subscribed to companies engaged in exploration or mining for petroleum and certain other minerals in Australia or Papua and New Guinea may, in certain circumstances, be deductible in full.

Special deductions may be allowed for certain expenditure of a capital nature incurred in mining or prospecting operations conducted for the purpose of earning assessable income and in the provision of certain transport facilities necessary for and directly related to those operations. In the case of primary producers certain developmental expenditure of a capital nature may be deducted. Deductions in addition to depreciation are allowed to manufacturers (for equipment purchased before 4 February 1971) and primary producers by way of an investment allowance for expenditure on specified plant and equipment. In addition, deductions may be allowed to primary producers for the cost of purchasing drought bonds. Subject to a maximum permissible tax saving, a special rebate is allowed for certain expenditure on export market development. The rebate is in addition to any normal deduction for the expenditure allowed as a business expense.

Residents of Zone A and Zone B, prescribed isolated areas subject to uncongenial climatic conditions and high costs of living are entitled to a zone allowance deduction. Members of the defence forces serving in certain overseas localities, are entitled to a deduction of the same amount as residents of Zone A.

### Concessional deductions

Concessional allowances to residents for dependants, medical and dental expenses, life insurance, superannuation contributions, etc. are made as a deduction from income. The maximum deduction allowed for the income year 1970-71 for each dependant or for a housekeeper is shown below.

<i>Dependant, etc. (resident)</i>	<i>Maximum deduction(a)</i>
	<b>\$</b>
Spouse, Daughter-housekeeper(b); housekeeper(c); Parent or parent-in-law . . . . .	312
One child under 16 years of age; Invalid relative(d); Student child 16 to 21 years . . . . .	208
Other children under 16 years of age . . . . .	156

(a) If the dependant is maintained for part only of the year, a partial deduction is allowed. (b) Of a widower or widow  
(c) Caring for a spouse in receipt of an invalid pension, or caring for children under 16 years of age of a widower or widow.  
(d) Child, step-child, brother or sister over 16 years of age.

If a dependant derives separate net income, which includes age or invalid pension but not child endowment, the deduction is reduced by the amount, by which the separate net income exceeds \$130. Scholarships are excluded except insofar as they relate to maintenance.

Medical expenses (less amounts recouped from hospital and medical funds) paid by a resident taxpayer in respect of himself or dependants, including children under twenty-one years of age, are allowed as a concessional deduction. These expenses include payments to a legally qualified medical practitioner, dentist, nurse or chemist, or hospital, in respect of an illness or operation, therapeutic treatment or eye tests, expenditure on medical or surgical appliances, artificial limbs or eyes, hearing aids and spectacles, payment of an attendant of a blind or bed-ridden person or for the maintenance of a trained dog used by a blind person.

Other concessional deductions allowed to resident taxpayers include: (i) payments of life insurance premiums and contributions to superannuation funds and friendly societies, (maximum \$1,200), (ii) payments to medical or hospital funds, (iii) funeral expenses (maximum \$100), (iv) expenditure incurred for the full-time education of children less than twenty-one years of age (maximum \$300 for each child), and (v) subscriptions to trade, business or professional associations or unions (maximum \$42 to each).

**Effective exemption from tax**

For the income years from 1963-64 onwards the income of a taxpayer without dependants was exempt from income tax if it did not exceed \$416. The effect of deductions for dependants was to exempt resident taxpayers up to the incomes shown in the samples hereunder.

**RESIDENT TAXPAYERS: EFFECTIVE EXEMPTIONS FROM INCOME TAX**

(\$)

<i>Income years ended June—</i>	<i>Taxpayer with—</i>		<i>Wife and—</i>			
	<i>No dependants</i>	<i>Wife only</i>	<i>one child</i>	<i>two children</i>	<i>three children</i>	<i>four children</i>
1964 to 1967 . . .	416	702	884	1,014	1,144	1,274
1968 to 1971 . . .	416	728	936	1,092	1,248	1,404

Special provisions applying for the 1970-71 income year to *resident aged persons* (i.e. men aged 65 years or more or women aged 60 years or more) were:

*(A) Single Persons Age Allowance Provisions*

<i>Taxable Income \$</i>	
Up to 1,326	No income tax payable
	<i>Income Tax limited to:</i>
1,327-1,532	16½ per cent of taxable income over \$1,326
1,533-2,080	\$34.33 plus 18 per cent of taxable income over \$1,532
2,081-2,132	\$132.97 plus 45 per cent of taxable income over \$2,080
2,133-2,273	\$156.37 plus 66½ per cent of taxable income over \$2,132

*(B) Married Couples Age Allowance Provisions*

<i>Combined Taxable Income(a) \$</i>	
Up to 2,314	No income tax payable
	<i>Income Tax limited to:</i>
2,315-2,500	16½ per cent of taxable income over \$2,314
2,501-3,000	\$31.00 plus 31 per cent of taxable income over \$2,500
3,001-3,640	\$186.00 plus 40 per cent of taxable income over \$3,000
3,641-3,744	\$442.00 plus 45 per cent of taxable income over \$3,640
3,745-4,102	\$488.80 plus 66½ per cent of taxable income over \$3,744

(a) Where a spouse has no taxable income the 'combined taxable income' is regarded as equal to the taxable income of the taxpayer.

NOTE. Income tax calculated under age allowance provisions is not now subject to a 2½ per cent levy.

**Rates of income tax on individuals**

The table on page 583 shows the rates of income tax for income years 1954-55 to 1970-71 as set out in the first schedule to the Income Tax Act.

Assessable income represents total actual income minus exempt income. Taxable income is the amount remaining after all allowable deductions have been made on assessable income.

The minimum amount of income tax payable is 50c.

Where the taxable income of a person does not exceed \$428 the amount of income tax payable is limited to 45 per cent of the excess of the taxable income over \$416, plus 2½ per cent of the amount so ascertained.

The only cases in which incomes below \$416 attract tax are those for which special rates are payable in accordance with the provisions of the *Income Tax (Partnerships and Trusts) Act 1969*.

For *primary producers* the rate of income tax for the current year is, in general, determined by the average of the taxable incomes for the five years up to and including the current year. In 1951 a taxpayer was given the right to elect not to have the averaging provisions applied but up to 1965-66 income year the election, if made under then existing legislation, was irrevocable. The *Income Tax Assessment Act 1966* amended this and a primary producer who, prior to the 1966-67 income year, elected to withdraw from the averaging system, was able to review that decision, being permitted to return to the averaging system provided that the necessary election was made in respect of any one of the income years 1966-67 to 1969-70. In the year of re-entry the taxpayer would be treated for averaging purposes as though he had never withdrawn from the system. However, with existing legislation, he will not have the right to withdraw again. The application of the averaging provisions is limited to that part of the taxable income which does not exceed \$16,000. When the taxable income does exceed \$16,000, the balance is taxed at ordinary rates applicable to that part. When the taxable income is less than \$16,000, the rate of tax for averaging purposes is limited to the rate on a taxable income of \$16,000.

The taxable income, including abnormal receipts, of *actors, artists, inventors*, etc. is taxed at the rate appropriate to the normal taxable income plus one-third of the abnormal receipts.

Interest derived from bonds, etc. issued between 1 January 1940 and 31 October 1968 by the Commonwealth, or on certain State semi-governmental loans issued free of State income tax, is subject to a rebate of income tax of 10 cents for each \$1 of interest received. The rebate does not apply to interest received from bonds, etc., issued on or after 1 November 1968.

#### COMMONWEALTH INCOME TAX—INDIVIDUALS: GENERAL RATES, 1954-55 TO 1970-71 INCOME YEARS

Total taxable income		1954-55 to 1964-65(a)		1965-66 to 1969-70(b)		1970-71(b)	
Column 1	Column 2	Tax on amount in column 1	Tax on each \$ of balance of income	Tax on amount in column 1	Tax on each \$ of balance of income	Tax on amount in column 1	Tax on each \$ of balance of income
Exceeding	Not exceeding						
\$	\$	\$	cents	\$	cents	\$	cents
Nil	200	Nil	0.42	Nil	0.40	Nil	0.30
200	300	0.83	1.25	0.80	1.20	0.60	1.20
300	400	2.08	2.92	2.00	2.90	1.80	2.70
400	500	5.00	4.58	4.90	4.50	4.50	4.10
500	600	9.58	6.25	9.40	6.10	8.60	5.50
600	800	15.83	8.33	15.50	8.20	14.10	7.40
800	1,000	32.50	10.83	31.90	10.80	28.90	9.70
1,000	1,200	54.17	12.50	53.50	12.50	48.30	11.30
1,200	1,400	79.17	14.17	78.50	14.20	70.90	12.80
1,400	1,600	107.50	15.83	106.90	15.90	96.50	14.30
1,600	1,800	139.17	17.50	138.70	17.60	125.10	15.80
1,800	2,000	174.17	19.17	173.90	19.30	156.70	17.30
2,000	2,400	212.50	21.67	212.50	21.60	191.30	19.50
2,400	2,800	299.17	24.58	298.90	24.60	269.30	22.10
2,800	3,200	397.50	27.08	397.30	27.10	357.70	24.40
3,200	3,600	505.83	29.58	505.70	29.60	455.30	26.70
3,600	4,000	624.17	32.08	624.10	32.10	562.10	28.80
4,000	4,800	752.50	35.42	752.50	35.40	677.30	31.90
4,800	5,600	1,035.83	38.33	1,035.70	38.30	932.50	34.50
5,600	6,400	1,342.50	41.25	1,342.10	41.20	1,208.50	37.00
6,400	7,200	1,672.50	43.75	1,671.70	43.80	1,504.50	39.40
7,200	8,000	2,022.50	46.25	2,022.10	46.30	1,819.70	41.70
8,000	8,800	2,392.50	48.75	2,392.50	48.70	2,153.30	43.90
8,800	10,000	2,782.50	51.67	2,782.10	51.70	2,504.50	46.50
10,000	12,000	3,402.50	55.00	3,402.50	55.00	3,062.50	50.60
12,000	16,000	4,502.50	57.92	4,502.50	57.90	4,074.50	56.40
16,000	20,000	6,819.17	60.42	6,818.50	60.40	6,330.50	62.40
20,000	32,000	9,235.83	63.33	9,234.50	63.30	8,826.50	66.70
32,000	upwards	16,835.83	66.67	16,830.50	66.70		

(a) For the 1959-60 and 1961-62 to 1963-64 income years a rebate of 5 per cent was allowable on the tax calculated from this schedule. (b) Additional tax equal to 2½ per cent of the tax calculated from this schedule was also payable.



**Income tax payable on specified incomes**

The following table shows, for the income years 1961-62 to 1970-71, the actual income tax payable by taxpayers with various incomes and numbers of dependants without regard to any rebate or refund which may apply.

**COMMONWEALTH INCOME TAX PAYABLE ON SPECIFIED INDIVIDUAL  
INCOMES, 1961-62 TO 1970-71 INCOME YEARS**  
(**\$**)

<i>Income(a)\$</i>	<i>1961-62 to 1963-64</i>	<i>1964-65</i>	<i>1965-66 and 1966-67</i>	<i>1967-68 to 1969-70</i>	<i>1970-71</i>

**TAXPAYER WITH NO DEPENDANTS**

1,000 . . . . .	51.50	54.20	54.83	54.83	49.50
2,000 . . . . .	201.90	212.50	217.81	217.81	196.08
3,000 . . . . .	429.10	451.70	462.78	462.78	416.66
4,000 . . . . .	714.90	752.50	771.31	771.31	694.23
5,000 . . . . .	1,056.90	1,112.50	1,140.10	1,140.10	1,026.53
10,000 . . . . .	3,232.40	3,402.50	3,487.56	3,487.56	3,139.06
20,000 . . . . .	8,774.00	9,235.80	9,465.36	9,465.36	9,047.16

**TAXPAYER WITH DEPENDENT WIFE**

1,000 . . . . .	24.00	25.30	25.45	23.27	21.12
2,000 . . . . .	151.10	159.10	162.72	158.02	142.47
3,000 . . . . .	357.60	376.40	385.53	378.97	341.26
4,000 . . . . .	627.70	660.70	677.20	668.64	602.12
5,000 . . . . .	955.10	1,005.38	1,030.37	1,020.95	919.18
10,000 . . . . .	3,092.00	3,254.70	3,335.99	3,322.21	2,990.35
20,000 . . . . .	8,609.90	9,063.00	9,288.29	9,272.20	8,847.60

**TAXPAYER WITH DEPENDENT WIFE AND ONE CHILD**

1,000 . . . . .	11.00	11.60	11.63	8.71	7.97
2,000 . . . . .	122.00	128.40	131.06	122.61	110.63
3,000 . . . . .	315.00	331.60	339.65	326.54	294.15
4,000 . . . . .	573.80	604.00	619.06	603.29	543.31
5,000 . . . . .	893.90	940.91	964.33	945.48	851.18
10,000 . . . . .	3,002.70	3,160.70	3,239.55	3,212.00	2,891.21
20,000 . . . . .	8,505.40	8,953.10	9,175.61	9,143.43	8,714.57

**TAXPAYER WITH DEPENDENT WIFE AND TWO CHILDREN**

1,000 . . . . .	4.80	..	..	..	..
2,000 . . . . .	102.40	107.80	109.88	98.49	88.93
3,000 . . . . .	284.70	299.70	306.87	289.54	260.84
4,000 . . . . .	537.30	565.60	579.62	555.95	500.61
5,000 . . . . .	850.20	894.88	917.16	888.86	800.16
10,000 . . . . .	2,938.80	3,093.50	3,170.66	3,129.32	2,816.86
20,000 . . . . .	8,430.80	8,874.50	9,095.13	9,046.84	8,614.78

(a) Income remaining after allowing all deductions other than deductions for dependants.



## Income tax assessments—Individuals

The following table shows for the 1968–69 income year the number of taxpayers, income, and net income tax assessed for individuals. For further information see the annual bulletin *Commonwealth Taxation Assessments*.

**COMMONWEALTH INCOME TAX ASSESSMENTS(a): RESIDENT INDIVIDUALS  
BY GRADE OF INCOME AND BY STATE, ETC. OF ASSESSMENT**  
(Income derived in the year 1968–69)

Grade of actual income(b) (\$ and State or Territory of assessment)	Taxpayers			Actual income(b) Total	Taxable income(c)			Net income tax assessed
	Males	Females	Total		Salary and wages	Other	Total	
	No.	No.	No.	\$'000	\$'000	\$'000	\$'000	\$'000
417– 599 . . . . .	44,043	90,668	134,711	69,243	55,673	10,723	66,395	1,419
600– 799 . . . . .	54,915	115,152	170,067	118,840	91,649	18,427	110,075	3,513
800– 999 . . . . .	54,933	117,531	172,464	155,347	117,694	23,967	141,660	6,300
1,000– 1,199 . . . . .	64,265	130,903	195,168	214,710	161,595	30,978	192,573	10,726
1,200– 1,399 . . . . .	71,995	137,843	209,838	272,881	204,062	38,756	242,820	16,025
1,400– 1,599 . . . . .	79,534	148,414	227,948	342,491	252,513	51,324	303,837	23,024
1,600– 1,799 . . . . .	85,620	164,016	249,636	424,276	315,961	59,799	375,760	32,133
1,800– 1,999 . . . . .	94,115	161,551	255,666	485,503	360,326	67,081	427,406	40,471
2,000– 2,199 . . . . .	112,178	142,567	254,745	534,884	390,039	73,776	463,815	47,353
2,200– 2,399 . . . . .	138,564	113,928	252,492	580,440	415,852	77,770	493,622	53,978
2,400– 2,599 . . . . .	164,839	87,114	251,953	629,888	442,763	82,032	524,794	60,635
2,600– 2,799 . . . . .	188,631	64,667	253,298	683,393	472,570	85,252	557,821	67,734
2,800– 2,999 . . . . .	200,321	49,380	249,701	723,935	497,258	86,326	583,584	74,441
3,000– 3,999 . . . . .	945,906	125,135	1,071,041	3,712,241	2,494,741	422,017	2,916,757	422,246
4,000– 5,999 . . . . .	799,860	77,522	877,382	4,178,536	2,614,299	622,552	3,236,851	592,593
6,000– 7,999 . . . . .	191,193	24,280	215,473	1,464,630	758,975	380,164	1,139,140	265,319
8,000– 9,999 . . . . .	62,046	10,186	72,232	639,421	264,133	245,781	509,914	140,613
10,000–19,999 . . . . .	64,662	10,906	75,568	985,828	295,145	522,553	817,698	289,976
20,000–29,999 . . . . .	7,729	1,116	8,845	209,293	44,054	137,683	181,737	85,481
30,000 and over . . . . .	3,115	486	3,601	167,151	27,365	118,716	146,081	82,470
Central office . . . . .	8,580	5,655	14,235	111,006	26,424	66,866	93,291	32,651
New South Wales . . . . .	1,256,029	660,284	1,916,313	6,208,011	4,009,598	1,047,475	5,057,071	874,693
Victoria . . . . .	952,192	524,562	1,476,754	4,716,867	2,972,657	864,871	3,837,528	670,576
Queensland . . . . .	464,670	214,021	678,691	2,058,760	1,160,552	461,032	1,621,584	263,684
South Australia . . . . .	322,129	163,281	485,410	1,442,802	883,236	279,081	1,162,316	183,702
Western Australia . . . . .	269,320	131,068	400,388	1,303,702	739,147	325,677	1,064,824	187,554
Tasmania . . . . .	105,924	48,106	154,030	463,578	289,817	76,245	366,062	58,520
Northern Territory . . . . .	14,028	5,601	19,629	76,040	44,957	10,346	55,303	10,844
Australian Capital Territory . . . . .	35,592	20,787	56,379	212,168	150,281	24,083	174,364	34,227
<b>Total residents . . . . .</b>	<b>3,428,464</b>	<b>1,773,365</b>	<b>5,201,829</b>	<b>16,592,933</b>	<b>10,276,669</b>	<b>3,155,676</b>	<b>13,432,342</b>	<b>2,316,451</b>

(a) Assessments in respect of 1968–69 incomes issued to 30 September 1970. Assessments issued after that date are not included.  
 (b) Actual income is 'gross income including exempt income less expenditure incurred in gaining that income'.  
 (c) Taxable income is the income remaining after deducting from assessable income all allowable deductions.

Details of the number of individual taxpayers and net income tax assessed by grades of actual income for the income years 1965-66 to 1968-69 are shown in the following table.

**COMMONWEALTH INCOME TAX ASSESSMENTS: RESIDENT INDIVIDUALS, BY GRADE OF ACTUAL INCOME(a) (INCOME YEARS 1965-66 TO 1968-69)**

Grade of actual income(a) (\$)	1965-66		1966-67		1967-68		1968-69	
	Tax-payers	Net income tax assessed	Tax-payers	Net income tax assessed	Tax-payers	Net income tax assessed	Tax-payers	Net income tax assessed
	No.	\$'000	No.	\$'000	No.	\$'000	No.	\$'000
417- 599	141,676	1,589	134,068	1,431	134,704	1,394	134,711	1,419
600- 799	182,683	3,847	171,671	3,562	168,835	3,538	170,067	3,513
800- 999	214,957	7,826	196,995	7,100	185,282	6,735	172,464	6,300
1,000- 1,199	245,847	13,440	231,968	12,641	211,874	11,667	195,168	10,726
1,200- 1,399	259,366	19,810	243,793	18,526	225,458	17,154	209,838	16,025
1,400- 1,599	280,021	28,135	271,943	27,385	251,307	25,529	227,948	23,024
1,600- 1,799	272,872	34,171	276,844	35,234	262,645	33,706	249,636	32,133
1,800- 1,999	262,280	38,824	264,304	40,321	263,449	41,086	255,666	40,471
2,000- 2,199	280,326	47,834	270,010	47,865	260,314	47,376	254,745	47,353
2,200- 2,399	284,991	55,588	274,637	55,529	264,375	54,716	252,492	53,978
2,400- 2,599	288,127	63,715	280,725	63,381	266,897	61,351	251,953	60,635
2,600- 2,799	284,841	70,434	276,502	70,252	268,846	69,089	253,298	67,734
2,800- 2,999	260,131	72,227	262,004	75,065	259,102	73,871	249,701	74,441
3,000- 3,999	831,852	309,965	922,098	351,613	1,004,324	383,872	1,071,041	422,246
4,000- 5,999	473,003	314,647	591,665	394,361	684,994	452,851	877,382	592,593
6,000- 7,999	111,480	143,944	140,914	179,821	160,057	199,938	215,473	265,319
8,000- 9,999	42,430	88,221	51,490	105,428	56,320	113,046	72,232	140,613
10,000-19,999	46,226	191,563	55,535	223,020	60,388	239,877	75,568	289,976
20,000-29,999	5,302	53,912	6,295	63,229	7,125	70,193	8,845	85,481
30,000 and over	2,141	48,561	2,524	58,389	3,127	78,303	3,601	82,470
<b>Total</b>	<b>4,770,552</b>	<b>1,608,256</b>	<b>4,925,985</b>	<b>1,834,154</b>	<b>4,999,423</b>	<b>1,985,293</b>	<b>5,201,829</b>	<b>2,316,451</b>

(a) Actual income is 'gross income including exempt income less expenditure incurred in gaining that income.'

### Partnerships and trusts

Income tax returns are required to be lodged on behalf of partnerships and trusts which, as partnerships and trusts, are not required to pay tax except in certain specified circumstances when they may be assessed as individuals. In general, the net income remaining, after allowing all deductions including expenditure incurred in gaining the income, is distributed to the partners or beneficiaries concerned and is assessable for tax in the respective individual returns.

The following table shows for the 1968-69 income year numbers, total business income and net income of partnerships and trusts. Greater detail is published in *Commonwealth Taxation Assessments Bulletins*.

#### PARTNERSHIPS AND TRUSTS—INCOME YEAR 1968-69

Item	Partnerships	Trusts	Total
Number .. ..	364,781	124,997	489,778
Total business income .. \$'000	5,307,268	79,161	5,386,429
Net income .. .. \$'000	1,866,561	207,212	2,073,773

### Company income taxes

For taxation purposes companies are divided into two main groups—private and public. Broadly, a private company is defined as a company in which all the issued shares are held by not more than twenty persons, or which is capable of being controlled by not more than seven persons, and which is not a company in which the public is substantially interested, or is a subsidiary of a public company. All other companies are regarded as public companies. Both private and public companies pay primary tax assessed on a taxable income ascertained on the same principles as for individuals.

Dividends received are assessable income; resident companies, however, receive a rebate at the average rate on the amount of dividends included in the taxable income, while this rebate is not allowed to non-resident companies.

A private company is liable to pay additional tax upon the amount, if any, by which the dividends paid by the company within a prescribed period fall short of sufficient distribution as defined.

*Rates of tax.* The rates of primary income tax for all companies and additional tax for private companies applicable to income years 1959–60 to 1970–71 are shown in the following table.

**RATES OF INCOME TAX: COMPANIES, 1959-60 TO 1970-71 INCOME YEARS**  
(Cents per \$)

Income years ended June	Resident private company			Resident public company(a)		Non resident company			
	On taxable income		Additional tax on un- distributed income	On taxable income		On dividends income		On other income	
	Up to \$10,000	On re- mainder		Up to \$10,000	On re- mainder	Up to \$10,000	On re- mainder	Up to \$10,000	On re- mainder
1960 to 1963	25	35	50	35	40	30	40	35	40
1964 to 1967	27½	37½	50	37½	42½	32½	42½	37½	42½
1968 and 1969	30	40	50	40	45	35	45	40	45
1970	32½	42½	50	42½	47½	37½	47½	42½	47½

(a) Excludes co-operative, non-profit and life insurance for which the rates of tax (in cents per \$) for 1969–70 income year were:

Type of company	Taxable income	
	Up to \$10,000	On remainder
Co-operative	37½	47½
Non-profit—Friendly societies' dispensaries	37½	37½
Other	37½	47½
Mutual life insurance	32½	42½
Other life insurance—Mutual income	32½	42½
Other income	42½	47½

A non-profit company is not liable to income tax unless the taxable income exceeds \$416, and where the taxable income does not exceed \$1,386 the maximum amount payable is one-half of the excess over \$416 less any rebate or credit to which the company is entitled. Other companies are assessed for income tax if the taxable income is \$1 or more.

Details in respect of company income tax assessments for the 1968–69 income year are shown in the following table.

**COMMONWEALTH INCOME TAX ASSESSMENTS: RESIDENT AND NON-RESIDENT COMPANIES, BY GRADE OF INCOME AND STATE, ETC., OF ASSESSMENT**

(Income derived in the year 1968-69)

Grade of taxable income(a) (\$) and State or Territory of assessment	Taxable			Non-taxable		
	Com- panies	Taxable income (a)	Net in- come tax assessed (b)	Com- panies	Taxable income (a)(c)	Loss
	No.	\$'000	\$'000	No.	\$'000	\$'000
Loss for year . . . . .						(d)245,562
Nil . . . . .						
1- 1,999 . . . . .	2,6206	17,445	5,106	3,782	2,871	
2,000- 9,999 . . . . .	32,633	180,088	51,476	4,244	21,327	
10,000- 19,999 . . . . .	14,043	193,057	59,791	1,276	17,917	
20,000- 39,999 . . . . .	7,352	205,324	69,024	643	17,713	
40,000- 99,999 . . . . .	4,903	299,268	104,902	395	24,332	
100,000- 199,999 . . . . .	1,796	249,977	90,471	125	17,441	
200,000- 399,999 . . . . .	972	269,939	94,629	71	19,409	
400,000- 999,999 . . . . .	685	414,480	141,362	47	28,088	
1,000,000-1,999,999 . . . . .	227	319,122	105,597	9	11,782	
2,000,000 and over . . . . .	216	1,291,249	429,019	9	38,478	(e)
New South Wales . . . . .	37,831	1,121,956	367,719	25,229	70,231	114,045
Victoria . . . . .	26,629	1,607,745	538,570	14,383	71,489	66,713
Queensland . . . . .	8,613	234,564	87,316	6,711	9,489	22,639
South Australia . . . . .	7,464	181,386	63,559	6,275	10,888	13,587
Western Australia . . . . .	4,694	158,282	58,937	3,441	4,911	18,059
Tasmania . . . . .	1,675	42,893	13,922	1,276	1,639	3,268
Northern Territory . . . . .	430	9,522	3,522	235	656	1,457
Australian Capital Territory . . . . .	1,697	83,600	17,831	2,687	30,056	5,793
<b>Total . . . . .</b>	<b>89,033</b>	<b>3,439,948</b>	<b>1,151,375</b>	<b>60,237</b>	<b>199,359</b>	<b>245,562</b>

(a) Taxable income is the income remaining after deducting from assessable income all allowable deductions. (b) Excludes additional tax on the undistributed income of private companies. (c) Net tax assessed is nil because of rebates. (d) Not included in the total shown for taxable income. (e) Not included in figures shown in adjoining column.

**Yield of income taxes**

*Income taxes collected.* The following table shows the net amounts of taxes collected and the proportions of the several components in the years 1965-66 to 1969-70.



## COMMONWEALTH INCOME TAXES COLLECTED: COLLECTION YEARS 1965-66 TO 1969-70

Source of income tax	1965-66	1966-67	1967-68	1968-69	1969-70
NET AMOUNTS COLLECTED (\$'000)					
Individuals—					
Instalments—salaries and wages . . . . .	1,160,369	1,323,537	1,507,456	1,727,290	2,084,219
Direct cash payments . . . . .	570,799	598,509	669,091	651,340	772,882
Companies . . . . .	801,105	784,544	836,664	1,006,543	1,151,364
Superannuation funds . . . . .	175	534	858	836	1,035
Withholding tax—Dividend . . . . .	17,247	22,708	21,716	28,303	38,003
Interest . . . . .	..	..	910	4,456	8,019
<b>Total . . . . .</b>	<b>2,549,695</b>	<b>2,729,832</b>	<b>3,036,695</b>	<b>3,418,768</b>	<b>4,055,523</b>
PERCENTAGES					
Individuals—					
Instalments—salaries and wages . . . . .	45.51	48.48	49.64	50.53	51.39
Direct cash payments . . . . .	22.38	21.93	22.03	19.05	19.06
Companies . . . . .	31.42	28.74	27.55	29.44	28.39
Superannuation funds . . . . .	0.01	0.02	0.03	0.02	0.02
Withholding tax—Dividend . . . . .	0.68	0.83	0.72	0.83	0.94
Interest . . . . .	..	..	0.03	0.13	0.20
<b>Total . . . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

*Income tax assessed.* The amounts of income tax covered by statistical analyses of assessments for recent years are shown in the following table. The amounts are shown under the year of income of the taxpayer. Tax is usually paid by companies in the year following the year of income. Individuals pay tax in the year of income, but there is usually an adjustment in the following year. Tax assessed after the close of the normal assessing period (fifteen months after the close of the income year for individuals and eighteen months for companies) is not included.

COMMONWEALTH INCOME TAXES ASSESSED: INCOME YEARS 1964-65 TO 1968-69  
(\$'000)

Tax	1964-65	1965-66	1966-67	1967-68	1968-69
Individuals—					
Residents . . . . .	1,446,732	1,608,256	1,834,154	1,985,293	2,316,451
Non-residents . . . . .	1,154	696	1,179	1,550	1,531
Companies—					
Primary tax . . . . .	787,099	786,925	832,582	1,010,357	1,148,259
Additional tax on undistributed income of private companies . . . . .	2,260	2,618	2,934	6,648	4,384
Superannuation Funds . . . . .	207	541	573	656	677
<b>Total . . . . .</b>	<b>2,237,452</b>	<b>2,399,036</b>	<b>2,671,422</b>	<b>3,004,504</b>	<b>3,471,302</b>

*Refunds of revenue.* Income tax collections, as previously shown, are net amounts after refunds of revenue made in the course of the year. Refunds are of two types—those charged to special appropriations under authority of the Income Tax Assessment Act and those charged to special appropriations under authority of the Audit Act. Income tax instalment refunds, by far the greatest part of income tax refunds, are made when the instalments deducted during the year exceed the tax assessed on incomes for that year. Refunds made from special appropriations under section 37A of the Audit Act include refunds of moneys paid to the revenue in error, refunds of tax overpaid, refunds due to the amendment of assessments, etc. Refunds of income tax to individuals during the collection years 1965-66 to 1969-70 were: 1965-66, \$305,830,000; 1966-67, \$353,194,000; 1967-68, \$398,371,000; 1968-69, \$477,965,000; and 1969-70, \$514,065,000.



## CHAPTER 19

### LOCAL GOVERNMENT

This chapter includes, in addition to information on the operation of local government authorities, information on the operation of certain semi-government authorities. The latter information is not comprehensive for this type of authority, and is included partly because of the association of the functions performed with those of local government authorities, and partly for convenience in preparation. Particulars of the activities of other semi-government authorities, e.g. transport, electricity and gas, and banking undertakings, for which only some financial statistics are given in this chapter, are included in the chapters relevant to those subjects.

#### Coverage

##### Local government authorities

In each State of the Commonwealth there exists a system of local government whose powers and responsibilities are in general similar, and cover such matters as the construction and maintenance of roads, streets and bridges, water, sewerage and drainage systems, and health and sanitary services, the supervision of building, and the administration of regulations relating to items such as weights and measures, slaughtering, the registration of dogs, etc. In addition to these obligatory functions, there are also many which may be performed by a local government authority either with or without the consent of the ratepayers or the Governor-in-Council. These include transport facilities, electricity, gas, and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, baths, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local authorities, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the Governor-in-Council. Otherwise, within the scope of the Acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers. While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc. differ considerably.

The areas over which local government bodies, numbering 900, exercise general control, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; in South Australia as cities, corporate towns and district council areas; in Western Australia as cities, towns and shires; and in Tasmania as cities and municipalities. In New South Wales some local government authorities in an area have combined to provide services such as electricity, water, sewerage and drainage—e.g. the county councils. Within shires there are also some municipal units known as urban areas. Apart from the more thinly populated parts of New South Wales and South Australia, and the Commonwealth Territories (except for the City of Darwin and Alice Springs), practically the whole of Australia comes within local government jurisdiction.

The financial statistics in the following section are classified under the headings of Ordinary Services and Business Undertakings. The former covers the obligatory and general functions referred to above. Business Undertakings include public utilities such as water supply, sewerage, electricity, gas, transport and hydraulic power undertakings, and other miscellaneous works such as abattoirs, quarries, ice works, cinemas, etc.

##### Semi-government authorities

In addition to local government authorities, a large number of authorities have been set up to control specific activities, which are often identical with some of those performed by either, or both of the other classes of public authority—central government and local government—and a complete picture of any field of activity for a State of Australia as a whole cannot be obtained without reference to each class operating in that particular field. These semi-government authorities differ primarily from local government authorities in that their operations are restricted to the specific activity for which they were constituted—e.g. roads and bridges, water and sewerage, electricity and irrigation, harbours, or tramways, etc.—i.e. each dispenses a specific service throughout an area as distinct

from the general services of the local authority. In the sections which deal with debt, roads and bridges, water supply and sewerage, harbours, and fire brigades particulars are included of the more important of these authorities which operate within the range covered by this chapter.

#### **Roads, bridges, etc.**

The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in each State there exists a central road authority or a government department whose duties relate to the construction, reconstruction and maintenance of 'main' and 'developmental' roads, the distribution of funds to local bodies, and the supervision and co-ordination of road construction and policy throughout the State. Owing to difficulty in obtaining complete particulars of receipts and expenditure of the various local governing bodies in respect of roads under their control, the details of receipts and expenditure given on pages 602-8 are those of central governments only, relating either to the supervisory board or commission in the State or to direct activities of a department. However, estimates of the aggregate net expenditure of all public authorities concerned with roads and bridges in Australia are given on page 601 of that section. On pages 594-7 some information is given of the revenue and expenditure of local government authorities in respect of roads.

#### **Water supply and sewerage**

In the cities of Sydney, Melbourne and Perth the control of water supply and sewerage is vested in special boards, while in Adelaide these services are under the direct supervision of a government department. In most of the other cities and towns the municipal councils or, in some cases, water trusts are the controlling bodies, which either construct the works out of their own resources or take them over after they have been constructed by the government.

#### **Harbours**

The majority of the harbours in Australia are managed by boards, the members of which are either elected by persons interested, or appointed by the government. In some instances, however, they are directly controlled by the government.

#### **Fire brigades**

In all the States the management of fire brigades is undertaken by boards. These boards usually comprise members elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, and one or more members appointed by the government. Occasionally volunteer or country fire brigades are represented.

### **Local government authorities**

#### **New South Wales**

For purposes of local government the whole of the Eastern and Central land divisions and more than two-thirds of the sparsely populated Western division have been divided into cities, municipalities (most principal towns) and shires (mainly large rural areas, some of which include important towns). At the end of 1969 the area incorporated was 272,452 square miles, or nearly nine-tenths of the total area of the State. All cities, municipalities and shires in the State are subject to the general provisions of the Local Government Act. Municipalities and shires may combine to form county councils for the establishment and conduct of services of joint benefit, e.g. electricity, water, gas, abattoirs. At 31 December 1969 there were fifty-three county councils, including the Sydney County Council (constituted under the Gas and Electricity Act).

#### **Victoria**

Local government is established throughout the State, the various divisions being termed cities, towns, boroughs, or shires. The only unincorporated areas are French Island (41,600 acres) in Westernport Bay, Lady Julia Percy Island (653 acres) off Port Fairy, Bass Strait Islands (966 acres), part of Gippsland Lakes (81,920 acres), and Tower Hill (1,459 acres) adjacent to the Borough of Kororoit. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a general system of local government, but are now subject to several provisions of the Local Government Act.

#### **Queensland**

The whole of the State (except certain islands along the coast) is incorporated into cities, towns and shires under the Local Government Act (City of Brisbane Act in the case of Brisbane).

#### **South Australia**

The settled portion of South Australia is incorporated, being mostly under municipal corporations in the larger cities and towns and district councils in the agricultural areas.



**Western Australia**

Local government is established throughout the State, the divisions being cities, towns and shires.

**Tasmania**

The whole State is divided into municipal districts, Hobart, Launceston, and Glenorchy being incorporated as cities under separate Acts.

**Area, population, dwellings, and value of rateable property**

The area, population, dwellings, and value of rateable property in the incorporated areas of each State are shown in the following table. The valuations relate to rateable property only and exclude government and other non-rateable property, whose value in the aggregate is considerable. In some cases councils rate on annual value, or unimproved capital value, or improved capital value, or partly on each of these bases of valuation. The amounts stated are the totals for the areas rated according to each basis of valuation. Particulars of dwellings are in accordance with the definition used in the 1966 census, and are compiled from information collected on the census schedules. For the purpose of the census a dwelling was defined as any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term has, therefore, a very wide reference and includes, in addition to houses and flats, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution. Unoccupied dwellings include vacant dwellings available for sale and renting, 'week-end' and holiday dwellings, and other dwellings temporarily unoccupied on the night of the Census. Dwellings being built are not included.

In the following table particulars of number, area, and value of rateable property refer to estimates made, where practicable, for the capital city statistical division and outside this division. Wherever the statistical boundary cuts across a local government area the estimates have involved either the inclusion or exclusion of the whole of the local government authority concerned in, or from, the capital city statistical division. Particulars of population refer to estimates made for capital city statistical division and outside this division in accordance with the definition of boundaries used in the 1966 census and exclude migratory population and population in unincorporated areas.

**LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS, AND  
VALUE OF RATEABLE PROPERTY, STATES, 1968-69**

Location	Number	Area	Popula- tion	Dwellings		Value of rateable property		
				Occupied	Unoccu- pied	Unim- proved capital value	Improved capital value	Annual value
		'000 acres	'000 (a)	No. (b)	No. (b)	\$'000	\$'000	\$'000
New South Wales(c)—								
Sydney Statistical Division .	40	974	2,541	730,877	39,701	4,116,969	9,860,315	668,852
Other . . . . .	185	173,396	1,693	458,665	61,845	1,821,878	n.a.	n.a.
Total, New South Wales	225	174,369	4,234	1,189,542	101,546	5,988,847	n.a.	n.a.
Victoria(d)—								
Melbourne Statistical Di- vision . . . . .	55	1,933	2,387	737,603		n.a.	10,134,080	550,153
Other(e) . . . . .	155	54,177	990	302,385		n.a.	4,795,014	240,988
Total, Victoria . . . .	210	56,110	3,377	1,039,988		n.a.	14,929,094	791,141
Queensland(a)—								
Brisbane Statistical Di- vision . . . . .	9	2,427	866	251,991		939,108	n.a.	n.a.
Other . . . . .	122	423,826	896	261,821		785,325	n.a.	n.a.
Total, Queensland . .	131	426,253	1,762	513,812		1,724,433	n.a.	n.a.
South Australia(f)—								
Adelaide Statistical Di- vision . . . . .	31	573	794	217,590	12,089	n.a.	2,338	116,912
Other . . . . .	111	36,679	314	81,662	12,502	n.a.	1,136	56,798
Total, South Australia .	142	37,252	1,108	299,252	24,591	n.a.	3,474	173,711
Western Australia(a)—								
Perth Statistical Division .	27	1,327	636	190,713		441,716	n.a.	35,572
Other . . . . .	117	623,262	308	90,713		252,244	n.a.	6,402
Total, Western Australia	144	624,589	946	281,426		693,960	n.a.	41,974

For footnotes see next page.

**LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS, AND  
VALUE OF RATEABLE PROPERTY, STATES, 1968-69—continued**

Location	Number	Area	Popula- tion	Dwellings		Value of rateable property		
				Occupied	Unoccu- pied	Unim- proved capital value	Improved capital value	Annual value
		'000 acres	'000 (a)	No. (b)	No. (b)	\$'000	\$'000	\$'000
Tasmania(a)—								
Hobart Statistical Division .	5	392	142	37,947	2,836	174,931	585,559	34,354
Other . . . . .	44	16,493	246	61,418	7,964	200,089	876,563	48,951
Total, Tasmania . . .	49	16,885	388	99,365	10,800	375,020	1,462,122	83,305

(a) Year ended 30 June 1969. Total population less migratory and unincorporated. (b) Estimated on basis of Census 30 June 1966. (c) Based on year ended 31 December 1968. (d) Based on year ended 30 September 1969. (e) Excludes Yallourn Works Area under the jurisdiction of the State Electricity Commission and other unincorporated areas. (f) Year ended 30 June 1968.

**Local government finances**

The following tables show financial statistics for local government authorities, for the latest available annual accounting periods (*see* footnotes to tables on pages 595-8).

*Ordinary services.* In the returns of revenue and expenditure in the following tables the proceeds from loans and expenditure thereof have been excluded. The financial operations of business undertakings controlled by the various local government authorities are given in the next paragraph. The profits resulting from the working of these undertakings, where taken into general revenue, have been included.

**LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND  
EXPENDITURE, STATES, 1968-69  
(\$'000)**

	N.S.W.(a)	Vic.(b)	Qld(c)	S.A.(d)	W.A.(c)	Tas.(c)	Total
<b>REVENUE (EXCLUDING LOAN RECEIPTS)</b>							
Taxation—							
Rates (net) . . . . .	143,812	94,500	48,680	24,369	19,572	10,496	341,429
Penalties . . . . .	1,477	514	..	..	..	..	1,990
Licences . . . . .	3,731	631	786	232	425	171	5,976
Vehicle registration fees and taxes . . . . .	..	..	..	..	5,115	..	5,115
Total, taxation . . .	149,020	95,644	49,467	24,601	25,112	10,667	354,511
Public works and services—							
Sanitary and garbage services .	11,537	4,143	9,551	347	1,370	33	26,982
Council properties . . . .	12,730	(e) 14,078	2,707	1,798	6,450	1,283	39,047
Street construction . . . .	9,590	24,557	..	4,951	3,440	136	42,674
Other . . . . .	19,370	5,883	3,411	410	2,758	(f) 417	32,249
Total, public works, etc. .	53,227	48,661	15,670	7,507	14,018	1,869	140,952
Government grants—							
Roads . . . . .	38,194	798	5,935	(g) 7,357	10,661	1,550	64,496
Other . . . . .	7,854	5,599	2,596	802	512	278	17,647
Total, government grants .	46,048	6,397	8,532	8,159	11,179	1,828	82,143
Profits from business undertakings	..	849	..	18	..	..	867
Fees and fines . . . . .	..	1,367	..	536	501	..	3,166
All other . . . . .	..	3,703	(h) 22,670	..	1,502	887	..
Total revenue . . . . .	248,295	156,621	96,338	40,822	52,312	15,251	689,639

For footnotes *see* next page.

**LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND  
EXPENDITURE, STATES, 1968-69—continued**  
(\$'000)

	<i>N.S.W.(a)</i>	<i>Vic.(b)</i>	<i>Qld(c)</i>	<i>S.A.(d)</i>	<i>W.A.(c)</i>	<i>Tas.(c)</i>	<i>Total</i>
<b>EXPENDITURE (EXCLUDING LOAN EXPENDITURE)</b>							
General administration . . . . .	17,597	23,909	10,285	3,886	4,401	(i)2,000	62,078
Debt services (excluding business undertakings)—							
Interest . . . . .	10,307	11,323	11,831	2,303	3,148	1,687	40,598
Redemption . . . . .	17,429	13,276	11,967	2,826	4,955	1,605	52,059
Exchange . . . . .	..	..	175	..	..	..	175
Other . . . . .	..	105	96	..	..	..	201
<i>Total, debt, etc.</i> . . . .	27,736	24,705	24,069	5,129	8,103	3,292	93,033
Public works and services—							
Roads, streets and bridges . . .	101,934	47,836	22,264	21,513	16,690	4,830	215,066
Health administration . . . . .	6,416	1,491	5,614	716	924	883	50,076
Sanitary and garbage services . .	15,838	7,824	7,029	1,304	2,039	..	..
Street lighting . . . . .	5,739	2,841	1,429	973	658	373	12,013
Council properties . . . . .	34,925	30,323	10,034	4,387	11,398	2,219	93,287
Other . . . . .	14,258	(j)11,512	467	1,074	4,776	546	32,633
<i>Total, public works, etc.</i> . .	179,110	101,826	46,837	29,967	36,485	8,851	403,076
Grants—							
Fire brigades . . . . .	1,364	2,146	684	348	468	..	..
Hospitals and ambulances . . . .	994	354	..	835	48	568	21,206
Other charities . . . . .	..	..	..	8	..	..	..
Other . . . . .	(k)8,467	(l)2,328	2,232	84	278	..	..
<i>Total, grants</i> . . . . .	10,826	4,828	2,916	1,275	794	568	21,206
All other . . . . .	10,269	1,609	(m)15,901	6	636	66	28,486
<b>Total expenditure</b> . . . . .	<b>245,537</b>	<b>156,878</b>	<b>100,008</b>	<b>40,263</b>	<b>50,417</b>	<b>14,776</b>	<b>607,879</b>

(a) Figures for New South Wales relate to the year ended 31 December 1968, and are on an income and expenditure basis as distinct from those of other States which are on a cash basis. (b) Year ended 30 September 1969. Figures include transactions of Private Street Accounts and Separate Rate Accounts. (c) Year ended 30 June 1969. (d) Year ended 30 June 1968. (e) Includes \$4,523,000 plant hire. (f) Includes Private Roads and Streets construction, Other Private Works and other. (g) Includes \$3,667,000 reimbursement from Highways Department. (h) Includes the following reimbursements: \$5,782,000 from Main Roads Department, \$1,763,000 from other State Government Departments, and \$7,371,000 from other sources. (i) Includes interest on overdraft. (j) Includes \$1,714,000 other capital expenditure. (k) To Main Roads Department. (l) Includes \$1,731,000 to Country Roads Board. (m) Includes expenditure on work done for reimbursement: for Main Roads Department \$5,308,000; for other State Government Departments \$1,826,000; other \$7,152,000.

**LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND  
EXPENDITURE, STATES, 1964-65 TO 1968-69**  
(\$'000)

<i>Year</i>	<i>N.S.W.(a)</i>	<i>Vic.(b)</i>	<i>Qld(c)</i>	<i>S.A.(c)</i>	<i>W.A.(c)</i>	<i>Tas.(c)</i>	<i>Total</i>
<b>Revenue(d)—</b>							
1964-65 . . . . .	187,689	116,405	66,088	32,360	34,921	10,930	448,393
1965-66 . . . . .	194,387	125,017	73,655	36,190	34,274	11,818	475,340
1966-67 . . . . .	214,626	137,232	78,514	40,314	39,716	12,850	523,252
1967-68 . . . . .	228,213	152,036	88,531	40,822	45,158	14,033	568,793
1968-69 . . . . .	248,295	156,621	96,338	(e)	52,312	15,251	(e)
<b>Expenditure(d)—</b>							
1964-65 . . . . .	181,265	119,013	70,730	33,147	31,588	11,278	447,022
1965-66 . . . . .	193,004	130,392	77,713	37,136	35,400	11,585	485,230
1966-67 . . . . .	212,587	136,984	83,150	39,280	40,334	12,411	524,745
1967-68 . . . . .	224,275	146,738	95,595	40,263	44,949	13,819	565,638
1968-69 . . . . .	245,537	156,878	100,008	(e)	50,417	14,776	(e)

(a) Years ended previous 31 December. (b) Years ended 30 September. Figures include transactions of Private Street Accounts. (c) Years ended 30 June. (d) Excludes loan receipts or expenditure. (e) Not yet available.

*Business undertakings.* The tables following show particulars of the revenue and expenditure, other than loan, of business undertakings under the control of local government authorities. These particulars are not included in the foregoing tables.

**LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—REVENUE  
AND EXPENDITURE, STATES, 1968-69**  
(\$'000)

	N.S.W.(a)	Vic.(b)	Qld(c)	S.A.(d)	W.A.(c)	Tas.(c)	Total
<b>REVENUE (EXCLUDING LOAN RECEIPTS)</b>							
Water supply and sewerage—							
Rates	13,604		(e)16,533	..	253	5,358	50,824
Charges for services and sales of products	4,061	723	9,520	1	34	737	
Other (including grants)	(f)7,126	24	1,765	..	88	1,371	
<i>Total, water supply, etc.</i>	<i>24,790</i>	<i>747</i>	<i>27,818</i>	<i>1</i>	<i>375</i>	<i>7,466</i>	<i>61,197</i>
Electricity and gas—							
Rates	1,252		18	..	..	..	360,123
Charges for services and sales of products	259,782	55,255	39,640	1,132	3,044	..	
Other (including grants)	(f)11,290	479	4,086	282	..	..	
<i>Total, electricity, etc.</i>	<i>272,324</i>	<i>55,733</i>	<i>43,744</i>	<i>1,414</i>	<i>3,044</i>	<i>..</i>	<i>376,260</i>
Railways, tramways and omnibuses—							
Charges for services and sales of products	..	..	7,580	..	..	..	7,580
Other (including grants)	..	..	3,265	..	..	..	3,265
<i>Total, railways, etc.</i>	<i>..</i>	<i>..</i>	<i>10,846</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>10,846</i>
Other—	(g)	(h)	(i)	(j)	(k)	(l)	
Rates	26	..	22	..	..	..	48
Charges for services and sales of products	14,160	1,719	221	529	501	650	17,780
Other (including grants)	1,344	64	1,844	65	..	111	3,428
<i>Total, other</i>	<i>15,530</i>	<i>1,783</i>	<i>2,088</i>	<i>594</i>	<i>501</i>	<i>761</i>	<i>21,257</i>
<b>Grand total</b>	<b>312,645</b>	<b>58,262</b>	<b>84,496</b>	<b>2,009</b>	<b>3,920</b>	<b>8,227</b>	<b>469,559</b>
<b>EXPENDITURE (EXCLUDING LOAN EXPENDITURE)</b>							
Water supply and sewerage—							
Working expenses	9,151	507	8,843	1	261	4,513	23,277
Depreciation	(m) 61	58	..	..	..	..	—3
Debt charges	8,745	164	7,362	..	157	2,886	19,314
Other (including transfers to general revenue and construction)	..	8	3,851	..	..	..	3,859
<i>Total, water supply, etc.</i>	<i>17,836</i>	<i>737</i>	<i>20,056</i>	<i>1</i>	<i>418</i>	<i>7,399</i>	<i>46,447</i>
Electricity and gas—							
Working expenses	220,521	51,221	31,636	1,248	2,141	..	306,766
Depreciation	6,819	1,506	..	..	448	..	8,773
Debt charges	30,941	1,843	7,381	62	530	..	40,756
Other (including transfers to general revenue and construction)	..	685	4,696	169	..	..	5,550
<i>Total, electricity, etc.</i>	<i>258,281</i>	<i>55,255</i>	<i>43,713</i>	<i>1,478</i>	<i>3,119</i>	<i>..</i>	<i>361,846</i>
Railways, tramways and omnibuses—							
Working expenses	..	..	8,311	..	..	..	8,311
Debt charges	..	..	1,489	..	..	..	1,489
Other (including transfers to general revenue and construction)	..	..	2,779	..	..	..	2,779
<i>Total, railways, etc.</i>	<i>..</i>	<i>..</i>	<i>12,579</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>12,579</i>
Other—	(g)	(h)	(i)	(j)	(k)	(l)	
Working expenses	14,831	1,517	839	635	424	435	18,682
Depreciation	179	103	..	1	..	..	282
Debt charges	1,374	96	116	..	..	180	1,767
Other (including transfers to general revenue and construction)	..	256	3,534	4	..	..	3,794
<i>Total, other</i>	<i>16,385</i>	<i>1,971</i>	<i>4,490</i>	<i>640</i>	<i>424</i>	<i>615</i>	<i>24,524</i>
<b>Grand total</b>	<b>292,501</b>	<b>57,963</b>	<b>80,837</b>	<b>2,120</b>	<b>3,960</b>	<b>8,014</b>	<b>445,395</b>

(a) Year ended 31 December 1968. (b) Year ended 30 September 1969. (c) Year ended 30 June 1969. (d) Year ended 30 June 1968. (e) Includes Sewerage and Cleansing Rates. (f) Includes Government grant: water supply and sewerage, \$5,494,000; electricity and gas, \$2,671,000; for part of cost of new works borne by Government. (g) Abattoirs. (h) Abattoirs, hydraulic power undertakings, quarries, iceworks, and reinforced concrete pipe and culvert works. (i) Off-street car parking, municipal markets, hostels, hotels and cinemas. (j) Quarries and hospitals. (k) Quarries, canteens and abattoirs. (l) Abattoirs. (m) Net balance after deducting charge for debt redemptions. The full amount of charge for debt redemption is included under debt charges.



**LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—REVENUE  
AND EXPENDITURE, STATES, 1964-65 TO 1968-69**  
(\\$'000)

<i>Year</i>	<i>N.S.W.(a)</i>	<i>Vic.(b)</i>	<i>Qld(c)</i>	<i>S.A.(c)</i>	<i>W.A.(c)</i>	<i>Tas.(c)</i>	<i>Total</i>
<b>Revenue(d)—</b>							
1964-65 . . .	226,234	45,352	58,500	1,621	2,364	5,320	339,392
1965-66 . . .	241,348	47,604	64,035	1,852	2,825	5,578	363,242
1966-67 . . .	261,107	50,884	69,341	2,174	3,295	6,226	393,026
1967-68 . . .	285,010	55,251	74,740	2,009	3,820	6,759	427,590
1968-69 . . .	312,645	58,262	77,237	(e)	3,920	8,227	(e)
<b>Expenditure(d)—</b>							
1964-65 . . .	210,052	45,117	54,816	1,682	2,318	4,898	318,883
1965-66 . . .	226,466	47,962	61,193	1,806	2,773	5,500	345,700
1966-67 . . .	246,238	50,963	64,950	2,297	3,227	5,856	373,532
1967-68 . . .	267,938	54,739	68,898	2,120	3,638	6,596	403,929
1968-69 . . .	292,501	57,963	80,837	(e)	3,960	8,014	(e)

(a) Years ended previous 31 December. (b) Years ended 30 September. (c) Years ended 30 June. (d) Excludes loan receipts or expenditure. (e) Not yet available.

*Loan expenditure.* The tables following show particulars of loan expenditure on works connected with the ordinary services and the business undertakings of local government authorities.

**LOCAL GOVERNMENT AUTHORITIES: LOAN EXPENDITURE, STATES  
1968-69**  
(\\$'000)

	<i>N.S.W.(a)</i>	<i>Vic.(b)</i>	<i>Qld(c)</i>	<i>S.A.(d)</i>	<i>W.A.(c)</i>	<i>Tas.(c)</i>	<i>Total</i>
<b>Ordinary services—</b>							
Roads, bridges, streets, foot-paths, drainage, and sewerage	12,911	10,925	32,871	4,774	2,818	2,411	66,709
Council properties . . .	(e)9,640	(e)14,362	(e)2,587	1,843	4,940	(e)1,636	35,008
Parks, gardens, and recreational reserves	2,998	2,752	4,579	588	2,672	511	14,099
Other . . . . .	(f)3,793	397	1,267	124	530	232	6,343
<i>Total, ordinary services</i>	29,341	28,436	41,303	7,330	10,960	4,789	122,159
<b>Business undertakings—</b>							
Water supply . . . . .	8,431	314	13,623	..	..	1,225	23,659
Sewerage . . . . .	6,082	..	..	..	66	2,601	8,683
Electricity and gas . . .	32,247	2,975	3,879	137	976	..	40,214
Railways, tramways and omnibuses . . . . .	..	..	1,715	..	..	..	1,715
Abattoirs . . . . .	1,489	36	..	..	..	..	1,525
Other . . . . .	..	7	360	..	..	..	367
<i>Total, business undertakings</i>	48,248	3,332	19,576	137	1,042	3,827	76,163
<b>Grand total</b>	<b>77,589</b>	<b>31,768</b>	<b>60,879</b>	<b>7,467</b>	<b>12,002</b>	<b>8,616</b>	<b>198,321</b>

(a) Year ended 31 December 1968. (b) Year ended 30 September 1969. Figures include transactions of Private Street Accounts. (c) Year ended 30 June 1969. (d) Year ended 30 June 1968. (e) Includes plant. (f) Includes advances for homes.

**LOCAL GOVERNMENT AUTHORITIES: LOAN EXPENDITURE**  
**STATES, 1964-65 TO 1968-69**  
 (\$'000)

<i>Year</i>	<i>N.S.W.(a)</i>	<i>Vic.(b)</i>	<i>Qld(c)</i>	<i>S.A.(c)</i>	<i>W.A.(c)</i>	<i>Tas.(c)</i>	<i>Total</i>
<b>Ordinary services—</b>							
1964-65 .	25,645	22,052	30,900	5,692	5,849	3,453	93,590
1965-66 .	25,817	24,280	30,959	6,219	7,143	3,655	98,073
1966-67 .	26,081	25,417	31,757	9,400	7,884	3,890	104,430
1967-68 .	26,161	26,792	33,871	7,330	8,603	4,432	107,189
1968-69 .	29,341	28,436	41,303	(d)	10,960	4,789	(d)
<b>Business undertakings—</b>							
1964-65 .	36,697	3,508	15,042	22	977	2,900	59,146
1965-66 .	41,711	3,570	16,365	20	903	4,687	67,256
1966-67 .	35,320	4,013	18,359	60	765	4,201	62,718
1967-68 .	49,865	3,940	19,526	137	1,205	4,932	79,605
1968-69 .	48,248	3,332	19,576	(d)	1,042	3,827	(d)

(a) Years ended previous 31 December. (b) Years ended 30 September. Figures for Victoria now include transactions of Private Street Accounts. (c) Years ended 30 June. (d) Not yet available.

### Local government and semi-government authorities' debt

Statistics of local government and semi-government debt for 1964-65 to 1968-69 are given in the following paragraphs. The information covers all local government authorities (including New South Wales County Councils) and those semi-government authorities responsible for the provision of the following services.

*New South Wales.* Water Supply, Sewerage and Drainage, Electricity and Gas Supply, Fire Brigades, Banking, Housing, Harbours, Grain Elevators, Roads and Bridges, Marketing, Industry Assistance, and Miscellaneous.

*Victoria.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Transport, Electricity and Gas Supply, Roads and Bridges, Fire Brigades, Marketing (Buying and Selling), Industry Assistance, Grain Elevators, and Housing.

*Queensland.* Water Supply and Sewerage, Irrigation and Drainage, Harbours, Transport, Electricity Supply, Fire Brigades, University, Hospitals and Ambulances, Marketing (Buying and Selling and Agency), and Industry Assistance.

*South Australia.* Irrigation and Drainage, Transport, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Industry Assistance, Banking, Housing, University and Miscellaneous.

*Western Australia.* Water Supply and Sewerage, Harbours, Transport, Electricity Supply, Fire Brigades, Hospitals, Marketing (Agency), Housing, University, and Miscellaneous.

*Tasmania.* Harbours, Electricity Supply, Fire Brigades, Transport, Housing, Industry Assistance and Water Supply.

The following table provides a summary of new money loan raisings, provisions for debt redemption, debt outstanding and interest payable by local government and semi-government authorities for the year 1968-69.

**LOCAL GOVERNMENT AND SEMI-GOVERNMENT AUTHORITIES: NEW MONEY  
LOAN RAISINGS, REDEMPTION, DEBT, AND INTEREST PAYABLE, STATES  
1968-69  
(\$'000)**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Total</i>
<b>LOCAL GOVERNMENT AUTHORITIES</b>							
New money loan raisings—							
From government . . . .	481	340	7,267	470		35	8,593
From public . . . . .	79,776	28,515	47,424	7,455	13,531	7,599	184,299
<i>Total loan raisings . . . .</i>	<i>80,257</i>	<i>28,855</i>	<i>54,691</i>	<i>7,925</i>	<i>13,531</i>	<i>7,633</i>	<i>192,893</i>
Funds provided for redemption—							
Government loans . . . .	672	177	1,752	905	2	33	3,541
Loans due to public . . . .	34,908	14,939	18,999	2,068	5,231	2,595	78,741
<i>Total funds, redemptions . .</i>	<i>35,580</i>	<i>15,117</i>	<i>20,751</i>	<i>2,973</i>	<i>5,233</i>	<i>2,628</i>	<i>82,283</i>
Accumulated sinking fund balance . . . . .	41,951	15,092	32,559	179	..	1,600	91,382
Debt—							
Due to government . . . .	7,059	7,675	42,386	6,956	23	917	65,017
Due to banks (net overdraft) . .	3,490	974	..	155	131	..	4,750
Due to public creditor(a) . .	667,982	214,667	379,742	47,324	66,556	63,280	1 439,551
<i>Total debt(a) . . . . .</i>	<i>678,532</i>	<i>223,317</i>	<i>422,128</i>	<i>54,435</i>	<i>66,710</i>	<i>64,197</i>	<i>1,509,318</i>
Maturing overseas(a)(b) . . .	..	..	3,200	..	..	..	3,200
Annual interest payable(a) . .	35,913	12,356	23,202	2,961	3,743	3,573	81,749
<b>SEMI-GOVERNMENT AND OTHER PUBLIC AUTHORITIES</b>							
New money loan raisings—							
From government . . . . .	32,605	55,236	3,731	39,547	22,140	26,975	180,223
From public . . . . .	73,200	124,269	39,334	30,314	16,668	9,770	293,555
<i>Total loan raisings . . . .</i>	<i>105,805</i>	<i>179,505</i>	<i>43,065</i>	<i>69,861</i>	<i>38,808</i>	<i>36,745</i>	<i>473,788</i>
Funds provided for redemption—							
Government loans . . . . .	9,242	7,772	1,554	4,610	2,088	3,084	28,350
Loans due to public . . . . .	17,721	31,429	12,003	418	2,699	1,972	66,243
<i>Total funds, redemptions . .</i>	<i>26,963</i>	<i>39,201</i>	<i>13,557</i>	<i>5,028</i>	<i>4,787</i>	<i>5,056</i>	<i>94,593</i>
Accumulated sinking fund balance . . . . .	123,251	58,116	22,310	(c)62	6,150	4,967	214,857
Debt—							
Due to government . . . . .	589,163	767,229	58,313	452,424	278,267	337,100	2,482,497
Due to banks (net overdraft) . .	3,569	541	..	151	5,124	..	9,385
Due to public creditor(a) . .	745,957	1,664,001	348,686	182,175	120,514	72,521	3,132,302
<i>Total debt(a) . . . . .</i>	<i>1,338,689</i>	<i>2,431,772</i>	<i>406,999</i>	<i>634,750</i>	<i>403,905</i>	<i>409,621</i>	<i>5,625,737</i>
Maturing overseas(a)(b) . . .	..	1,551	..	..	..	..	1,551
Annual interest payable(a) . .	71,537	122,428	22,025	30,943	18,907	20,407	286,248

(a) Includes debt or interest payable in London and New York. Debt in London is payable in £ sterling which have been converted at the I.M.F. rate of £Stg1 to \$A2.1428; New York debt is payable in U.S. dollars which have been converted at the I.M.F. rate of \$US1.12 to \$A1. (b) Included in debt figures above. (c) In 1968-69 the State Bank Redemption Fund was transferred to the Bank Reserve Fund.

NOTE. In Official Year Books prior to No. 54 (1968) New South Wales County Councils were included in the semi-government division.

In the table above and the following table debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalised and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more are included. Current liabilities, such as interest accrued (but not capitalised), trade creditors, amounts held in trust, and other debts which are to be repaid in less than one year are not included. Net overdraft is the gross overdraft of all funds less all bank credit balances (including fixed deposits) which do not form part of a sinking fund to repay a loan. New loans raised during the year include new loan liabilities incurred during the year, loans raised from the public to repay indebtedness to the Government, and interest capitalised. Loans raised and redeemed within the year, increases in overdrafts, and loans raised for conversion or redemption of existing debt are excluded. Funds provided for redemption include instalments of principal repaid and amounts credited to sinking funds established for the purpose of repaying the debt on maturity. Amounts provided for redemption from loans raised for that purpose are excluded.

**LOCAL GOVERNMENT AND SEMI-GOVERNMENT AUTHORITIES: NEW MONEY  
LOAN RAISINGS, REDEMPTION AND DEBT, AUSTRALIA, 1964-65 TO 1968-69**  
(\$'000)

	1964-65	1965-66	1966-67	1967-68	1968-69
<b>LOCAL GOVERNMENT AUTHORITIES</b>					
New money loan raisings—					
From government . . . .	3,945	6,412	5,235	5,616	8,593
From public . . . . .	136,762	136,148	157,610	178,424	184,299
<i>Total loan raisings</i> . . . .	140,708	142,560	162,845	184,040	192,893
Funds provided for redemption—					
Government loans . . . .	4,278	4,281	3,919	3,717	3,541
Loans due to public . . . .	56,186	59,033	66,437	71,738	78,741
<i>Total funds, redemptions</i> .	60,464	63,314	70,355	75,455	82,283
Accumulated sinking fund balance .	59,496	65,226	73,753	81,179	91,382
Debt—					
Due to government . . . .	55,301	57,342	58,339	60,171	65,017
Due to banks (net overdraft) .	4,245	7,090	9,226	4,335	4,750
Due to public creditor(a) . .	1,031,619	1,114,762	1,211,401	1,324,816	1,439,551
<i>Total debt(a)</i> . . . . .	1,091,166	1,179,194	1,278,967	1,389,323	1,509,318
Maturing overseas(a)(b) . . . .	10,043	9,686	4,329	3,557	3,200
<b>SEMI-GOVERNMENT AND OTHER PUBLIC AUTHORITIES</b>					
New money loan raisings—					
From government . . . . .	142,131	142,445	143,074	164,315	180,223
From public . . . . .	197,872	194,588	221,064	246,164	293,555
<i>Total loan raisings</i> . . . .	340,003	337,034	364,138	410,479	473,788
Funds provided for redemption—					
Government loans . . . . .	20,904	23,995	25,459	28,112	28,350
Loans due to public . . . . .	40,006	42,395	43,082	63,042	66,243
<i>Total funds, redemptions</i> .	60,910	66,389	68,541	91,154	94,593
Accumulated sinking fund balance .	141,926	159,463	177,944	195,363	214,857
Debt—					
Due to government . . . . .	1,955,426	2,083,267	2,198,078	2,330,275	2,482,497
Due to banks (net overdraft) .	1,125	652	7,462	7,029	9,385
Due to public creditor(a) . .	2,311,699	2,481,444	2,680,589	2,880,936	3,132,302
<i>Total debt(a)</i> . . . . .	4,268,250	4,565,363	4,886,130	5,218,239	5,625,737
Maturing overseas(a)(b) . . . .	14,718	12,858	11,810	5,837	1,551

(a) See footnote (a) page 599. (b) Included in debt figures above.

## Roads and bridges

### Summary of roads open for general traffic

Tables showing road lengths in the several States and Territories classified according to class of road and surface of road may be found in Chapter 12, Transport, Communication, and Travel.

### Aggregate net expenditure on roads and bridges in Australia

In most States there are three classes of authorities concerned with roads and bridges the State Government, the central road authority, and numerous local government bodies. The Commonwealth Government, in addition to the grants it makes to the States for road purposes, is concerned with roads in the Northern Territory and the Australian Capital Territory and roads of access to Commonwealth property in the various States. Some information relating to Commonwealth grants to the States for road purposes and particulars of the expenditure on roads and bridges by local government bodies and the central road authorities are given in later sections of this chapter.



Most of these authorities may expend money directly on road construction or indirectly by means of grants and payments to other authorities. These indirect payments, if included in an aggregate, would duplicate expenditure; this together with the fact that some authorities are unable to supply separate information concerning their road expenditure, makes it difficult to compile precise statistics of aggregate expenditure on roads and bridges.

The information in the following table, which is partly estimated and which excludes the main indirect payments, provides an approximate measure of the aggregate net expenditure by the three classes of authorities mentioned above on roads and bridges in Australia during each of the years ended 30 June 1966 to 1970. Expenditure on roads by those authorities whose primary activity is directed towards functions other than roads, e.g. electricity, forestry, housing, etc., authorities, is not included. The figures cover expenditure on the construction, reconstruction and maintenance of roads and bridges, and direct administration but not debt charges. Because of the difficulties associated with the indirect payments mentioned above, it is not possible to give separate net details for each authority.

**PUBLIC AUTHORITY NET EXPENDITURE ON ROADS AND BRIDGES**  
STATES AND TERRITORIES, 1965-66 TO 1969-70  
(\$ million)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. and A.C.T.(a)	Aust.
1965-66.	159	121	72	41	39	21	13	465
1966-67.	168	129	79	47	47	19	13	502
1967-68.	(b)172	143	89	47	48	19	18	(b)536
1968-69(b)	184	163	92	49	48	19	23	578
1969-70(b)	197	182	101	59	53	18	23	633

(a) In each of the years 1965-66 to 1969-70 Commonwealth expenditure on roads other than in the Northern Territory and Australian Capital Territory was approximately \$300,000. (b) Estimated.

#### Commonwealth Government grants

The following table shows the allocations to the States under the several Commonwealth Aid Roads Acts for road construction, maintenance, repair and other works connected with transport for each of the years 1965-66 to 1969-70. After 1 July 1959, when the *Commonwealth Aid Roads Act* 1959 came into operation, the Commonwealth made separate provision for expenditure on strategic roads and the promotion of road safety practices. See also Chapter 18, Public Finance, and Finance bulletins.

**ROAD CONSTRUCTION, MAINTENANCE, ETC.: GRANTS UNDER THE**  
COMMONWEALTH AID ROADS ACTS, STATES, 1965-66 TO 1969-70  
(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
1965-66	39,191	27,508	25,538	16,024	24,739	7,000	140,000
1966-67	41,744	29,443	27,415	17,222	26,676	7,500	150,000
1967-68	44,467	31,286	29,266	18,384	28,597	8,000	160,000
1968-69	47,319	33,113	31,098	19,433	30,537	8,500	170,000
1969-70	57,060	38,160	34,740	21,000	32,940	9,100	193,000

#### New South Wales

Main roads administration is organised as a separate department under the control of a Commissioner. The activities of the Department of Main Roads include works on main, secondary, developmental and tourist roads throughout the State, all roads in the unincorporated portion of the Western Division, and certain associated works, principally bridges and vehicular ferries, constructed and maintained from government funds. The Department of Main Roads co-operates with the municipal and shire councils in the work of constructing and maintaining the main roads system.

In the County of Cumberland, which for the purposes of the Main Roads Act is deemed to include the City of Blue Mountains and small sections of other councils' areas on the boundary of the County of Cumberland, the full cost of main road and bridge construction, half the cost of secondary roads, and a proportion (in general, up to half) of the cost of tourist roads are met from the

funds of the Department of Main Roads. The Councils do not contribute directly to the cost of these works but are required to pay a levy of 0.2083 cents in the \$ on the unimproved capital value of rateable property within Council's area or at a uniform percentage determined annually by the Commissioner of between ten per cent and fifteen per cent of Council's total rate income, whichever is the less. In the former case the rate payable in respect of lands used principally for primary production is half the rate levied on other lands.

In country districts the Department meets the full cost of road and bridge works on State highways, the full cost of bridge construction works and three-quarters of the cost of road construction and road and bridge maintenance works on trunk roads, three-quarters of the cost of bridge construction works and two-thirds of the cost of road construction and road and bridge maintenance works on ordinary main roads, and, in most cases, up to half the cost of works on tourist roads. The cost of constructing developmental roads and works is borne in full by the Department of Main Roads, but local Councils are required to maintain them in a satisfactory condition.

The funds of the Department of Main Roads are derived principally from motor vehicle taxation, charges on heavy commercial goods vehicles under the Road Maintenance (Contribution) Act, 1958-1969, grants under Commonwealth Aid Roads Acts (see page 601 and the Chapter, Public Finance), other grants from the State or Commonwealth Governments, and proceeds of a levy on municipal and shire councils in the County of Cumberland in accordance with the Main Roads Act, 1924. The State Government also makes repayable advances for Main Roads Department works, and since 1963 the Commissioner for Main Roads has had the power (with the approval of the Governor on the recommendation of the Treasurer) to borrow moneys. The figures shown below represent the aggregate revenue and expenditure of five funds: the County of Cumberland Main Roads General and Special Purposes Funds, the Country Main Roads General and Special Purposes Funds, and the Developmental Roads Fund.

**DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES: REVENUE  
AND EXPENDITURE, 1965-66 TO 1969-70**  
(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70 <sup>a</sup>
<b>REVENUE(a)</b>					
Motor vehicle taxation, registration and licence fees . . . . .	42,471	42,897	45,248	49,636	52,519
Commonwealth Aid Roads Acts . . . . .	24,648	26,313	28,013	29,814	40,207
State and Commonwealth grants . . . . .	35	63	..	..	..
Contributions by other departments and bodies . . . . .	377	893	516	350	1,194
Local authorities' contributions—					
Under section 11 of Main Roads Act . . . . .	6,418	7,600	8,241	7,538	9,820
Other . . . . .	157	250	385	262	30
Sydney-Newcastle Expressway Toll . . . . .	356	706	892	1,530	2,096
Other . . . . .	539	564	652	859	776
<b>Total . . . . .</b>	<b>75,001</b>	<b>79,286</b>	<b>83,947</b>	<b>89,989</b>	<b>106,642</b>
<b>EXPENDITURE(b)</b>					
Roads and bridges—					
Construction . . . . .	61,714	62,590	64,534	67,950	79,999
Maintenance . . . . .	15,813	17,677	17,352	19,719	22,114
Administration . . . . .	3,757	4,296	4,816	5,379	6,133
Interest, exchange, etc., on debt . . . . .	1,609	1,856	2,094	2,541	3,126
Other(c) . . . . .	1,467	1,753	1,705	2,229	3,185
<b>Total . . . . .</b>	<b>84,360</b>	<b>88,172</b>	<b>90,501</b>	<b>97,819</b>	<b>114,555</b>

(a) Excludes repayable advances by the State Government and private loans (\$5,005,000 in 1965-66, \$6,500,000 in 1966-67, \$8,750,000 in 1967-68, \$12,900,000 in 1968-69 and \$10,600,000 in 1969-70), and transfers from Sydney Harbour Bridge Account for Expressway construction (\$4,750,000 in 1965-66, \$3,743,000 in 1966-67, \$4,775,000 in 1967-68, \$900,000 in 1968-69, and \$224,000 in 1969-70). Expenditure from these amounts is fully reflected in Expenditure.  
(b) Excludes debt redemption (\$441,000 in 1965-66, \$346,000 in 1966-67, \$477,000 in 1967-68, \$812,000 in 1968-69 and \$984,000 in 1969-70) and repayment of government advances (\$200,000 in 1965-66 and later years). (c) Mainly purchase of assets not subject to annual depreciation charge. The purchase of other assets is omitted here because the depreciation charge for them is reflected each year in 'Roads and bridges'.

Toll facilities operated by the Department of Main Roads include the Sydney Harbour Bridge and completed sections of the Sydney-Newcastle Expressway.

The Sydney Harbour Bridge was opened for traffic on 19 March 1932, and has a main span of 1,650 feet with clearance for shipping of 170 feet. The deck, 160 feet wide, carries eight road traffic lanes, two railway tracks and two footways. During 1969-70, 45,415,518 road vehicles (excluding buses and exempt vehicles), 26,228,422 rail passengers and 12,033,025 bus passengers crossed the bridge. Income from tolls during 1969-70 amounted to \$4,866,000, including road tolls \$4,549,000, rail passenger tolls \$290,000 and bus passenger tolls \$27,000.

The sections of the Sydney-Newcastle Expressway now open to traffic extend approximately six miles between Berowra and the Hawkesbury River and approximately ten miles north of the river to Calga. The Department is currently constructing a bridge on the Hawkesbury River to link these two sections of the Expressway. Total cost of the project to 30 June 1970 was \$29.4 million. Toll collections during the year ended 30 June 1970 amounted to \$2,096,149.

### Victoria

With the object of improving the main roads of the State, the Country Roads Board was established by legislation passed in 1912. The principal duties of the Board are to determine which roads should be declared in the various classifications; to supervise the construction, reconstruction and maintenance of these roads; to inquire into the State's resources in road materials and the most effective methods of road construction and maintenance; and to recommend deviations in existing roads or the construction of new roads in order to facilitate communications or to improve the conditions of traffic.

The funds of the Country Roads Board are derived principally from motor registration fees, two-thirds of additional registration fees (charged on initial registration or transfer), a proportion of drivers' licence fees, payments by the Commonwealth Government under the Commonwealth Aid Roads Acts, roads charges under the Commercial Goods Vehicles Act, repayments by municipalities and, since 1965, a share of the addition to registration fees paid to the Roads (Special Projects) Fund and a grant under the Public Works Loan Application Act. In addition, loans have been authorised from time to time under the Country Roads Acts for permanent works on main and developmental roads, State highways, tourists' roads and forest roads, while the State Government has provided, free of repayment, loan moneys for restoration of flood and bush fire damage. Finance for the elimination of level crossings and for improved approaches, signs, lighting and other work to reduce danger at level crossings is derived mainly from the one third of additional registration fees paid into the Level Crossings Fund, maintained by the Board.

### COUNTRY ROADS BOARD, VICTORIA: RECEIPTS AND PAYMENTS 1965-66 TO 1969-70 (\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
RECEIPTS					
Motor Car Act—registration and licence fees (less cost of collection)	24,690	25,871	26,805	28,889	30,868
Municipalities' payments	1,691	1,824	1,845	1,931	1,904
Commonwealth Aid Roads Acts	27,175	29,050	30,895	32,723	38,160
Roads (Special Projects) Fund	1,654	3,311	2,652	3,055	3,533
Loans from State Government	1,020	834	987	3,389	900
Road charges, Commercial Goods Vehicles Act	6,379	6,732	7,248	7,842	8,555
Public Works Loan Application Act	768	715	700	784	849
Other	971	459	380	520	498
<b>Total</b>	<b>64,348</b>	<b>68,796</b>	<b>71,513</b>	<b>79,132</b>	<b>85,267</b>



COUNTRY ROADS BOARD, VICTORIA: RECEIPTS AND PAYMENTS  
1965-66 TO 1969-70—continued  
(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
PAYMENTS					
Construction and maintenance of roads and bridges—					
State highways . . . . .	17,704	19,674	19,003	18,349	22,078
Main roads . . . . .	16,569	16,765	16,769	16,940	17,783
By-pass roads . . . . .	3,745	5,172	7,969	11,682	13,439
Tourist roads . . . . .	1,510	2,312	2,857	2,793	3,112
Forest roads . . . . .	699	737	658	678	798
Unclassified roads . . . . .	12,709	12,798	13,739	14,248	16,356
Other . . . . .	140	45	82	86	112
Plant purchase . . . . .	1,149	1,388	1,234	1,583	1,818
Interest, debt redemption, etc. . . . .	2,056	2,140	2,190	2,306	2,443
Office buildings, Kew—capital cost . . . . .	12	31	8	59	49
Statutory payment to—					
Tourists' Resorts Fund . . . . .	468	494	517	536	578
Transport Regulation Board . . . . .	178	383	404	435	471
Administration and other . . . . .	6,339	5,637	7,011	7,756	8,078
<b>Total . . . . .</b>	<b>63,278</b>	<b>67,575</b>	<b>72,443</b>	<b>77,452</b>	<b>87,115</b>

The Melbourne and Metropolitan Board of Works bears the responsibility for carrying-out planning scheme proposals relating to metropolitan highways and bridges, and is now carrying out a programme of urgent highway works throughout the metropolitan area of Melbourne. The extension of the South-Eastern Freeway from Burnley to Tooronga and the Tullamarine Freeway to serve the new Tullamarine airport have now been completed. Expenditure on road projects up to 30 June 1970 was \$49.2m. Of this amount, \$18.6m was financed from the proceeds of the Board's Metropolitan Improvement Rate and \$30.6m was contributed by the Treasurer of Victoria from the Roads (Special Projects) Fund.

The Lower Yarra Crossing Authority was incorporated in October 1965 as a company limited by guarantee and given powers under the *Lower Yarra Crossing Authority Act 1965* to construct, operate and maintain a toll crossing over the lower reaches of the River Yarra. For details of financial and engineering arrangements prior to the disaster of 15 October 1970 see Official Year Book No. 56 1970, page 610 and see also the chronological table.

### Queensland

The Department of Main Roads was constituted in February 1951 with the Commissioner of Main Roads as its permanent head. The duties of the Commissioner are to carry out surveys and investigations necessary to determine State highways, main developmental, and secondary roads; and the responsibility for building and maintaining these declared roads is largely that of the Commissioner. Roads of purely local importance are constructed and maintained by local authorities. In many cases construction is financed by the State Government by means of Treasury loans. Other roads may be built by the Public Estate Improvement Branch of the Lands Department in order to open up areas of previously inaccessible or undeveloped country.

The funds of the Department of Main Roads are obtained chiefly from motor vehicle registration and collection, fees, etc., under the Transport Acts, contributions under the Commonwealth Aid Roads Acts, and loans, grants and advances from the State Government. The total receipts and payments during each of the years 1964-65 to 1968-69 are shown in the following table.



**DEPARTMENT OF MAIN ROADS, QUEENSLAND: RECEIPTS AND PAYMENTS**  
**1964-65 TO 1968-69**  
(\$'000)

	1964-65	1965-66	1966-67	1967-68	1968-69
<b>RECEIPTS</b>					
Motor vehicle registration, Transport Acts collections, fees, etc. . . . .	15,531	15,704	18,645	20,664	22,048
Loans from State Government . . . . .	1,039	1,330	1,127	672	2,330
Grants from State Government . . . . .		586	1,785	2,420	746
Roads (Contribution to Maintenance) Act . . . . .	3,027	3,142	3,592	3,918	4,297
Commonwealth Aid Roads and Works Act . . . . .	27,919	29,188	31,707	33,075	35,296
Maintenance repayments—local authorities . . . . .	1,125	1,125	1,192	1,400	1,471
Hire, rent, sales of plant, etc. . . . .	3,704	3,449	3,898	3,908	5,852
Other . . . . .	2,043	2,066	2,755	2,895	1,040
<b>Total . . . . .</b>	<b>54,388</b>	<b>56,590</b>	<b>64,701</b>	<b>68,952</b>	<b>73,080</b>
<b>PAYMENTS</b>					
Permanent road works and surveys(a) . . . . .	39,993	35,356	40,141	41,931	46,798
Maintenance of roads . . . . .	6,466	6,876	8,310	9,095	8,929
Plant, machinery, buildings, etc. (including plant maintenance) . . . . .	3,735	4,418	3,716	4,407	4,060
Loans—					
Interest . . . . .	203	276	301	338	276
Redemption . . . . .	697	432	396	954	934
Administration and other . . . . .	5,618	7,104	9,000	10,706	10,292
<b>Total . . . . .</b>	<b>56,712</b>	<b>54,462</b>	<b>61,864</b>	<b>67,431</b>	<b>71,289</b>

(a) Includes grants to local authorities for road purposes.

### South Australia

The Highways Department is administered by the Commissioner of Highways, who is empowered, subject to the approval of the Minister of Roads and Transport, to undertake the construction, maintenance and protection of the principal roads of the State, allocate grants to councils for road-works and supervise the expenditure of these grants, and assist Councils to purchase road-making plant and to defray the cost of roadworks. In addition, the Commissioner advises Councils on technical questions concerning the construction, maintenance or repair of roads. Funds of the Department are derived mainly from the Highways Fund, into which are paid the proceeds from motor vehicle registration and drivers' licences (less cost of collection), appropriations from loan funds, repayments of advances made to Councils, and contributions by the Municipal Tramways Trust, and from contributions under the Commonwealth Aid Roads Acts.

The following table shows particulars of receipts and payments, during the years 1965-66 to 1969-70, of funds controlled by the Highways Department.

**HIGHWAYS DEPARTMENT, SOUTH AUSTRALIA**  
**RECEIPTS AND PAYMENTS, 1965-66 TO 1969-70**  
 (\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>RECEIPTS</b>					
Motor vehicles registration, licences, fees . . . . .	11,206	11,506	11,858	12,536	13,250
Commonwealth Aid Roads Acts . . . . .	16,024	17,223	18,384	19,433	21,000
Other(a) . . . . .	3,340	3,496	3,693	3,799	5,161
<b>Total . . . . .</b>	<b>30,570</b>	<b>32,225</b>	<b>33,934</b>	<b>35,767</b>	<b>39,412</b>
<b>PAYMENTS</b>					
Construction and reconstruction of roads and bridges(b) . . . . .	20,912	22,834	20,799	23,837	30,200
Maintenance(a)(b) . . . . .	5,375	6,000	7,128	8,211	10,271
Recoups to Consolidated Revenue Fund—interest, debt redemption and exchange . . . . .	1,167	514	518	522	544
Advances to local and semi-governmental authorities . . . . .	1,376	1,091	1,386	1,253	402
Repayments to Revenue under Section 31 (a), Highways Act . . . . .	..	1,000	240	..	..
Stores, plant, machinery, suspense accounts, etc.(c) . . . . .	1,214	1,792	2,866	-105	581
<b>Total . . . . .</b>	<b>30,044</b>	<b>33,231</b>	<b>32,936</b>	<b>33,718</b>	<b>41,998</b>

(a) Includes reimbursement works for Commonwealth Government. (b) Includes administration expenses.  
 (c) Represents gross repayments less recoveries by charges to works on account of depreciation and materials used.

### Western Australia

Work connected with road construction and maintenance and associated projects in Western Australia is undertaken by the State Government, through the Main Roads Department, and by local government authorities throughout the State. The Department operates under the *Main Roads Act*, 1930-1969, and is administered by a Commissioner of Main Roads responsible to the Minister for Works. The Act makes provision for the construction and maintenance of public roads in the categories of main roads, controlled-access roads and developmental roads. An additional category, that of important secondary roads, is used by the Department in determining its works programme. Within its own district each local government authority is responsible for the provision and upkeep of roads other than those provided by the Main Roads Department. In addition, the local authority is required by the Main Roads Act to maintain any developmental road situated in its district.

The funds of the Main Roads Department are derived principally from allocations made under the *Commonwealth Aid Roads Act* 1969 under which Western Australia has been allotted grants totalling \$200,400,000 for the five-year period commencing 1 July 1969. In the seven-year period to 30 June 1974 grants totalling a maximum of \$9,500,000 are to be received from the Commonwealth for the improvement of roads used for the transport of beef cattle in the Kimberley District, including \$1.4 million, \$1,451,000 and \$1,168,000 in the years 1967-68 to 1969-70 respectively. Other sources of income include a portion of vehicle licence fees collected by local government authorities and the Commissioner of Police, overload permit fees and an allocation from drivers' licence fees. Further moneys for expenditure on road maintenance are available under the *Road Maintenance (Contribution) Act* 1965 administered by the Commissioner of Transport. Since 1 July 1969 the Main Roads Department, through changes to legislation, has administered funds not previously included in receipts and payments of the Department. Receipts and payments for the years 1965-66 to 1969-70 are shown in the following table.

**MAIN ROADS DEPARTMENT, WESTERN AUSTRALIA: RECEIPTS AND  
PAYMENTS, 1965-66 TO 1969-70(a)**  
(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>RECEIPTS</b>					
Motor vehicle registration, licence fees, etc.—					
Police Department . . . . .	4,054	3,820	3,868	4,435	7,958
Local Authorities . . . . .	..	..	..	..	3,367
Commonwealth Aid Roads Acts . . . . .	22,618	23,475	24,307	25,148	32,940
Commonwealth Aid Roads Acts—matching grants . . . . .	463	763	1,202	2,040	..
Western Australia Grant (Beef Cattle Roads) Act . . . . .	1,500	1,500	..	..	..
State Grants (Beef Cattle Roads) Act . . . . .	..	..	1,400	1,451	1,168
Road Maintenance (Contribution) Act . . . . .	..	2,619	3,100	3,086	3,557
Recoups from other authorities . . . . .	917	1,821	1,469	2,488	2,433
Other . . . . .	(b)2,024	176	272	299	307
<b>Total . . . . .</b>	<b>31,576</b>	<b>34,173</b>	<b>35,618</b>	<b>38,946</b>	<b>51,730</b>
<b>PAYMENTS</b>					
Construction and reconstruction of roads and bridges(c) . . . . .	21,012	26,009	24,846	27,456	28,921
Maintenance of roads and bridges(c) . . . . .	1,856	3,010	3,294	4,452	4,820
Recoups to local authorities(d) . . . . .	3,501	3,518	4,307	..	..
Grants to local authorities . . . . .	..	..	..	..	10,997
Transfer to State Consolidated Revenue . . . . .	253	258	258	258	267
Plant, machinery, etc. . . . .	1,709	1,789	2,046	516	950
Other(c) . . . . .	1,861	1,678	1,642	3,760	3,809
<b>Total . . . . .</b>	<b>30,192</b>	<b>36,262</b>	<b>36,393</b>	<b>36,442</b>	<b>49,764</b>

(a) Figures for years 1965-66 to 1969-70 have been revised to reflect accounting changes introduced 1 July 1969.  
 (b) Includes \$1,896,000 transferred from an Overhaul Account previously administered by the Public Works Department.  
 (c) Includes administration and expenditure on hire and maintenance of road construction plant, etc., and on purchase of materials.  
 (d) Consists of payments to local authorities for work carried out on behalf of the Main Roads Department. From 1968-69 these payments have been included in 'Construction and reconstruction of roads and bridges' and 'Maintenance of roads and bridges'.

### Tasmania

Under the *Roads and Jetties Act 1935*, the control of the construction and maintenance of roads and certain road making plant was vested in the Minister for Lands and Works. Works authorised by the Minister in respect of roads classified as State highways, main roads, secondary roads and tourist and developmental roads are constructed by the Department of Public Works and financed from the State Highways Trust Fund, into which are paid Commonwealth Aid Roads grants, motor vehicle taxes and public vehicle fees. Loan funds are also authorised by Parliament for road purposes. Municipal councils contribute towards the cost of maintaining main and secondary roads in the classified system. The maintenance of roads not included in the classified system is the responsibility of municipal councils, but they are assisted with grants made available under the Commonwealth Aid Roads Act for expenditure on Rural Roads.

The table following shows particulars of the receipts and payments of the combined Road Funds for the years 1965-66 to 1969-70 (municipal council receipts from rates and loans for road purposes are excluded).

## ROAD FUNDS, TASMANIA: RECEIPTS AND PAYMENTS, 1965-66 TO 1969-70

(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
RECEIPTS					
Motor vehicle taxation and registration, licences, fees, fines, etc.	3,425	3,961	4,396	4,587	4,827
Commonwealth Aid Roads and Works Acts	7,000	7,500	8,000	8,500	9,100
Recoups from local authorities, etc.	18	38	32	70	18
State Loan Fund	4,446	1,693	1,188	739	1,100
Hire of plant and workshop charges	3,732	3,824	4,170	4,129	4,410
Other	220	262	565	304	342
<b>Total</b>	<b>18,842</b>	<b>17,279</b>	<b>18,350</b>	<b>18,329</b>	<b>19,796</b>
PAYMENTS					
Construction and reconstruction of roads and bridges	11,591	9,445	10,214	9,434	10,908
Maintenance of roads and bridges	3,141	3,167	3,436	3,540	3,806
Other works connected with transport	62	45	48	73	..
Special Grants to local authorities(a)	35	37	46	54	58
Purchase, maintenance and operation of plant	3,751	3,884	4,276	4,392	4,400
Planning and research	..	..	..	..	120
Other	300	759	346	339	101
<b>Total</b>	<b>18,881</b>	<b>17,337</b>	<b>18,367</b>	<b>17,833</b>	<b>19,393</b>

(a) The main grants to local authorities are included in other payments items, principally for maintenance work.

## Water supply, sewerage and drainage

The information in this section relates primarily to the metropolitan areas and provincial cities and towns. For information on water supply and irrigation in rural areas see Chapter 24, Water Conservation and Irrigation.

## New South Wales

The two largest domestic water supply and sewerage systems are controlled by statutory boards each consisting of a president and a vice-president appointed by the State Government, and five members elected by local councils. These are (a) the Metropolitan Water, Sewerage and Drainage Board, which administers the systems in the County of Cumberland, i.e. in Sydney and in the surrounding districts, and, in addition, has jurisdiction over territory extending along the South Coast beyond Wollongong to Lake Illawarra, Shellharbour and Kiama, and (b) the Hunter District Water Board serving the Newcastle-Maitland-Cessnock areas. At Broken Hill and Cobar similar boards include representatives of the mining companies. Other systems, apart from irrigation projects and water storage systems administered by the State Government, are controlled by county, municipal or shire councils.

*Metropolitan and Hunter District water supply.* The storage reservoirs of the metropolitan water supply system with a combined available capacity of 574,335 million gallons, drain catchment areas of 3,890 square miles (including Warragamba, 3,480 square miles, Upper Nepean, 347 square miles, and Woronora, 29 square miles). The development of a water supply system on the Warragamba River was completed with the official opening of the Warragamba Dam in October 1960. This dam, constructed in concrete, has a storage capacity of 452,505 million gallons. Its safe net draught is estimated to be 274 million gallons a day. At 30 June 1970 there were 183 service reservoirs in use with a combined capacity of 725 million gallons. Fluoridation of the metropolitan water supply commenced in April 1968.



The water supply of the *Hunter District system* is drawn principally from three sources; the Chichester Reservoir, with a storage capacity of about 3,902 million gallons and draining a catchment of 76 square miles, the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens, and the Grahamstown Water Supply Scheme which is still being developed. Another source of supply is provided by the Nelson Bay-Anna Bay Scheme. Service reservoirs and tanks distributed throughout the water supply district have a total storage capacity of 126 million gallons.

The following tables show, for the Metropolitan and Hunter District systems, the number of properties, the estimated population supplied, and other details.

#### METROPOLITAN WATER SUPPLY(a), NEW SOUTH WALES: SERVICES, 1965-66 TO 1969-70

Year	Improved properties for which water mains available	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of mains	Number of meters
					Per property	Per head of estimated population		
		'000	mil. gal	mil. gal	gallons	gallons	miles	
1965-66	712,059	2,723	230	83,802	323	84	7,972	495,850
1966-67	735,360	2,756	234	85,383	318	85	8,105	515,653
1967-68	756,063	2,816	270	98,981	357	96	8,325	532,859
1968-69	775,548	2,885	302	110,347	389	106	8,534	550,017
1969-70	795,918	2,968	285	104,017	358	97	8,805	583,818

(a) County of Cumberland, City of Greater Wollongong, Shellharbour and Kiama Municipalities, and parts of Colo and Wollondilly Shires.

#### HUNTER DISTRICT WATER SUPPLY(a): SERVICES, 1965-66 TO 1969-70

Year	Properties supplied	Estimated population supplied	Average daily con- sumption	Total con- sumption for year	Average daily consumption		Length of mains
					Per property	Per head of estimated population	
			mil. gal	mil. gal	gallons	gallons	miles
1965-66	94,779	320,451	32.8	11,970	346	102	1,673
1966-67	96,755	327,514	31.6	11,521	326	96	1,702
1967-68	99,066	335,565	37.4	13,675	377	111	1,740
1968-69	100,941	342,167	42.5	15,513	421	124	1,786
1969-70	103,308	350,783	40.9	14,918	396	115	1,850

(a) Newcastle, Maitland and Cessnock areas.

*Metropolitan and Hunter District sewerage and drainage systems.* The metropolitan sewerage and drainage system serving Sydney and suburbs comprises 4 major sewerage systems and 8 minor systems, consisting of 7 outfalls discharging directly into the Pacific Ocean and 5 treatment works. There are also 8 centres outside the metropolitan area of which 5 (Camden, Campbelltown, St Mary's, Richmond and Warragamba township) are served by local treatment works and 3 (Bellambi, Port Kembla and Wollongong) discharge directly into the Pacific Ocean. Stormwater drainage channels under the control of the Metropolitan Water, Sewerage and Drainage Board at 30 June 1970 were 186 miles long.

The main sewerage system of the *Hunter District* serves the City of Newcastle and discharges into the Pacific Ocean at Burwood Beach. There are also local treatment works at Maitland, Cessnock and some of the outlying districts.

The following table gives details of sewerage services and stormwater drains of the Metropolitan system.

**METROPOLITAN SEWERAGE AND DRAINAGE(a)  
NEW SOUTH WALES: SERVICES, 1966 TO 1970**

30 June—	Improved properties for which sewerage available	Estimated population served	Length of sewers	Length of stormwater channels
		'000	miles	miles
1966 . . .	524,225	2,000	5,585	181
1967 . . .	547,630	2,052	5,881	182
1968 . . .	574,847	2,135	6,166	184
1969 . . .	602,312	2,235	6,504	186
1970 . . .	637,258	2,374	6,804	190

(a) County of Cumberland, City of Greater Wollongong, Shellharbour and Kiama Municipalities, and parts of Colo and Wollondilly Shires.

At 30 June 1970, 83,806 premises had been connected to the Hunter District Water Board's sewerage system (Newcastle-Maitland-Cessnock areas). The total length of sewers under the Board's control was 1,133 miles, and the length of drains was 52 miles.

*Metropolitan and Hunter District systems' finances.* The following table shows the debt, revenue and expenditure of the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board for each of the services of water supply, sewerage and drainage during 1969-70, and for the three services combined for the years 1965-66 to 1969-70.

**METROPOLITAN AND HUNTER DISTRICT WATER SUPPLY, SEWERAGE  
AND DRAINAGE, NEW SOUTH WALES: FINANCES, 1965-66 TO 1969-70  
(\$'000)**

Year	Capital debt at 30 June	Revenue	Expenditure				Total	Surplus (+) or deficit (-)
			Working expenses (a)	Interest and exchange	Debt redemption			
METROPOLITAN(b)								
1969-70—								
Water . . .	338,945	47,058	24,749	16,428	5,874	47,051	+ 7	
Sewerage . . .	274,266	38,991	20,943	13,070	4,973	38,986	+ 5	
Drainage . . .	14,263	2,294	1,420	714	157	2,291	+ 3	
Total, 1969-70 . . .	627,475	88,343	47,112	30,213	11,004	88,328	+ 15	
1968-69 . . .	590,869	80,206	41,865	28,216	10,105	80,185	+ 2	
1967-68 . . .	550,793	68,917	31,765	26,389	10,754	68,908	+ 9	
1966-67 . . .	513,816	62,701	28,914	24,132	9,635	62,681	+ 20	
1965-66 . . .	475,200	58,092	27,169	22,166	8,743	58,078	+ 14	
HUNTER DISTRICT(c)								
1969-70—								
Water . . .	67,457	7,061	3,023	3,432	715	7,169	-109	
Sewerage . . .	22,790	3,288	2,000	1,131	285	3,416	-128	
Drainage . . .	1,167	164	128	54	9	191	- 27	
Total, 1969-70 . . .	(d)94,909	10,513	5,152	4,616	1,008	10,776	-263	
1968-69 . . .	(d)89,835	9,621	4,722	3,973	925	9,620	+ 2	
1967-68 . . .	(d)84,698	8,651	4,106	3,740	843	8,688	- 38	
1966-67 . . .	(d)79,497	7,928	3,786	3,254	765	7,805	+122	
1965-66 . . .	(d)74,593	7,804	3,469	3,442	861	7,772	+ 32	

(a) Includes provision for renewals, long service leave, etc. (b) County of Cumberland, City of Greater Wollongong, Shellharbour and Kiama Municipalities, and parts of Colo and Wollondilly Shires. (c) Newcastle-Maitland-Cessnock areas. (d) Includes General Fund indebtedness not dissected by services.

*Local government country water supply and sewerage systems.* At 31 December 1967, country water supply services were conducted or under construction by 48 municipalities, 92 shires and 6 county councils, and country sewerage services by 51 municipalities and 51 shires. The capital indebtedness of these schemes was \$118,822,000 at 31 December 1967. Debt of the municipalities amounted to \$56,461,000, shires to \$48,152,000, and county councils to \$14,209,000. Government advances amounting to \$866,000 are included in these figures. Aggregate income and expenditure amounted to \$21,715,000 and \$15,420,000, respectively, in 1967.

*Other country water supply and sewerage systems.* The water supply and sewerage services for Broken Hill are operated by a statutory board, the Broken Hill Water Board. Its capital indebtedness at 31 December 1969 was \$5,601,000. In 1969, income (excluding subsidies, State Government \$201,000 and mining companies \$511,000) amounted to \$781,000 and expenditure (excluding debt redemption \$290,000) amounted to \$1,197,000. The Cobar Water Board was constituted in February 1964. At 31 December 1969 its capital indebtedness was \$2,269,000. The following country water supply systems—South-West Tablelands, Junee, and Fish River—are administered by the Department of Public Works. These supply water in bulk to municipalities and shires, the Electricity Commission of New South Wales, and other large consumers. Only a small quantity is sold direct to private consumers. The capital indebtedness of these systems was \$15,050,000 at 31 December 1969. The Mulwala Water Supply and Sewerage Service was constructed as an urgent war-time work for the Commonwealth, and the Bethungra Water Supply System is administered by the Department of Public Works in conjunction with the Junee supply.

### Victoria

*Melbourne and Metropolitan Board of Works.* The Board consists of a Chairman and fifty-two Commissioners elected to represent the municipalities which lie wholly or partly within the metropolitan area. The principal functions of the Board are: to control and manage the metropolitan water supply system; to provide the metropolitan area with an efficient main and general sewerage system; to deal with main drains and main drainage works; to control and manage the rivers, creeks and watercourses within the metropolitan area; and to carry out the functions of a permanent planning authority.

*Metropolitan water supply.* There are 6 storage reservoirs serving the metropolitan area—Yan Yean, 7,233 million gallons (available for consumption, 6,649 million gallons); Toorourrong, 60 million gallons; Maroondah, 6,289 million gallons (4,870 million gallons); O'Shannassy, 930 million gallons; Silvan, 8,853 million gallons (8,823 million gallons); and Upper Yarra, 45,400 million gallons (44,120 million gallons); total 68,765 million gallons (65,452 million gallons). Service reservoirs number 49, with a total capacity of 373 million gallons. The following table shows particulars of Melbourne metropolitan water supply services for the years 1965-66 to 1969-70.

MELBOURNE WATER SUPPLY: SERVICES, 1965-66 TO 1969-70

Year	Number of houses supplied	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of aqueducts, etc. mains and reticulation	Number of meters
					Per house	Per head of estimated population		
		'000	mil. gal	mil. gal	gallons	gallons	miles	
1965-66	612,844	2,120	178.7	65,218	292	84.2	6,280	536,093
1966-67	626,690	2,143	188.5	68,815	301	88.0	6,517	559,713
1967-68	642,039	2,170	139.0	50,876	216	64.1	6,791	577,713
1968-69	658,944	2,227	173.4	63,288	263	77.9	7,034	595,560
1969-70	676,111	2,285	183.7	67,063	272	80.4	7,176	612,074

*Metropolitan sewerage and drainage.* Particulars of sewerage and drainage services for 1965-66 to 1969-70 are shown on the next page.

## MELBOURNE SEWERAGE AND DRAINAGE: SERVICES, 1965-66 TO 1969-70

Year	Number of houses for which sewers are provided	Estimated population for which sewers are provided	Average daily pumping	Total sewage pumped for the year	Average daily pumping		Length of sewers, etc.	Length of main drains
					Per house	Per head of estimated population		
		'000	mil. gal	mil. gal	gallons	gallons	miles	miles
1965-66	467,705	1,599	94.6	34,545	202.4	59.2	4,311	229
1966-67	484,798	1,629	98.1	35,793	202.3	60.2	4,554	233
1967-68	509,185	1,719	86.1	31,514	169.1	50.1	4,739	240
1968-69	528,983	1,788	96.7	35,300	182.8	54.1	4,906	250
1969-70	543,870	1,846	109.5	39,972	201.3	59.3	5,073	255

The metropolitan sewerage system consists of the main system (serving an area of 117,945 acres) and 8 subsidiary systems—the Braeside system (serving an area of 6,618 acres), the Kew system (serving an area of 113 acres), the Maribyrnong system (serving an area of 182 acres), the Watsonia system (serving an area of 253 acres), the Lower Plenty system (serving an area of 1,700 acres), and the Heatherton system (serving an area of 1,184 acres), the Altona system (serving an area of 137 acres) and the Chelsea system (serving an area of 670 acres). The Board of Works Farm, 26,809 acres in extent and situated about twenty-four miles south west of Melbourne beyond the township Werribee, serves to purify and dispose of approximately ninety-five per cent of the sewerage flow of the metropolis before its discharge into Port Phillip Bay.

*Melbourne and Metropolitan Board of Works' finances.* The following table provides for the year 1969-70 a summary of the financial operations of the water supply, sewerage and drainage services conducted by the Melbourne and Metropolitan Board of Works, and of the combined services for the years 1965-66 to 1969-70. The financial operations of the Board as the Authority responsible for metropolitan highways and bridges are referred to on pages 603-4.

MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES  
1965-66 TO 1969-70  
(\$'000)

Service, etc.	Capital cost of works and buildings at 30 June(a)	Revenue	Expenditure					Surplus (+) or deficit (-)
			Working expenses	Works	Interest and exchange	Debt redemption	Total	
Water . . .	198,817	20,266	6,800	910	9,600	..	17,310	+2,956
Sewerage . . .	252,009	24,258	6,847	1,700	12,486	..	21,033	+3,225
Drainage . . .	37,594	4,573	1,188	990	1,582	..	3,760	+ 813
General(b) . . .	17,537	..	3,850	..	..	3,443	7,293	-7,293
Total, 1969-70 .	505,957	49,097	18,685	3,600	23,668	3,443	49,396	- 299
1968-69 .	449,333	41,981	15,427	2,334	21,184	3,239	42,183	- 202
1967-68 .	411,221	35,587	13,213	1,776	19,258	2,685	36,932	-1,345
1966-67 .	376,271	32,111	12,333	..	17,834	2,552	32,719	- 608
1965-66 .	345,210	30,165	11,362	..	16,526	2,274	30,162	+ 3

(a) Total loan indebtedness—1969-70, \$447,006,289.

(b) Statutory and general expenditure not distributed over services.

*State Rivers and Water Supply Commission.* Water supply and conservation throughout Victoria (except for the area controlled by the Melbourne and Metropolitan Board of Works) is under the jurisdiction of the State Rivers and Water Supply Commission. The events leading to the establishment of the Commission, and its works in the spheres of irrigation, domestic and stock water supply to farms, drainage, flood protection, and river improvements, are described in the chapter, Water Conservation and Irrigation. This section is therefore confined to the Commission's functions in connection with urban water supply and sewerage.



*Extra-metropolitan water supply.* At 30 June 1970 the Commission provided a reticulated water supply from its own works to 148 cities and towns having a combined population of 248,220 persons. The principal systems operated by the Commission serve part of the Mornington Peninsula—Dandenong area (about 116,000 people supplied); Bendigo, Castlemaine, etc. (58,500); and about 8,700 people in the Western District. In addition, 14,000 persons in a number of towns in the Bellarine Peninsula receive supply through a Commission-operated distributory system from headworks controlled by the Geelong Waterworks and Sewerage Trust. The Bendigo-Castlemaine supply also provides for the irrigation of 11,000 acres as well as urban requirements in the area. Outside these areas the Commission supplies mainly small towns in the north of the State in areas where it also supplies farms with water for irrigation or domestic and stock purposes. Capital expenditure by the Commission on urban water supply at 30 June 1970 was divided between the several systems as follows: Mornington Peninsula, \$33,478,000, Bendigo-Castlemaine, \$15,343,000 (includes the cost of supplying a comparatively large rural system with water for irrigation, stock and domestic purposes); Bellarine Peninsula, \$3,867,000; Otway System (Western District), \$3,229,000; other \$3,441,000; total, \$59,358,000. This expenditure is net of redemption payments and includes expenditure on Lake Eppalock not yet charged to the water users. In addition to the towns supplied by the Commission there are some 678,060 people in 259 cities and towns throughout the State who get a reticulated water supply from works operated by local authorities.

All these authorities operate under the supervision of the State Rivers and Water Supply Commission, largely because the Government subsidises their capital expenditure. Most new works are financed from Government loan funds, but the Geelong Trust and in recent years some other local authorities borrowed money privately. In most cases the local authority controls both headworks and distribution system, but several towns draw their water from the State Rivers and Water Supply Commission and are concerned only with reticulation of the water. Together, therefore, the Commission and local authorities supply 407 urban centres containing some 926,280 people. Very few towns of any importance are now without reticulated water supply.

*Extra-metropolitan sewerage systems.* With the exception of the town of Eildon, whose sewerage system is controlled directly by the State Rivers and Water Supply Commission, the construction and management of sewerage works in Victoria's country cities and towns are the responsibility of local authorities supervised by the Commission. Except for the Geelong Waterworks and Sewerage Trust, and the Latrobe Valley Water and Sewerage Board, which have special Acts dealing with their activities, all sewerage authorities operate under the Sewerage Districts Act. At 30 June 1970, 101 sewerage authorities had been constituted. Of these 77 had systems in operation and 10 had works under construction.

Expenditure on sewerage in Victorian country towns at 30 June 1970 was approximately \$94,014,600, of which some \$77,038,600 had been advanced by private lenders. The annual State subsidy on country sewerage in Victoria is currently about \$1,458,300, provided mainly in the form of subsidies on interest rates paid along the same lines as for town water supply.

The *Geelong water supply scheme*, operated by the Geelong Waterworks and Sewerage Trust, comprises two systems for gathering and storing water, the water in both systems being brought over fifty miles to Geelong. There are 8 storage reservoirs and 11 service basins whose total storage capacity is 13,446 million gallons. The length of water mains and reticulation is 580.3 miles. The total expenditure on water supply to 30 June 1970 was \$19,893,768. General fund expenditure for 1969-70 comprised \$523,871 for working expenses and \$1,412,652 for interest, redemption and reserves, while revenue from water rates, etc., amounted to \$1,960,961. The sinking fund appropriations at June 1970 amounted to \$1,458,684. The replacement and contingencies reserve amounted to \$1,712,848.

The *Geelong Waterworks and Sewerage Trust sewerage scheme* consists of a main outfall sewer to the ocean and 366.2 miles of main and reticulation sewers. The sewerage area is 21,220 acres, and the number of buildings connected within the sewered areas is 30,272. The total expenditure on sewerage works to 30 June 1970 was \$14,202,560. The revenue from sewerage rates, etc., in 1969-70 amounted to \$1,234,597, and the general fund expenditure comprised \$342,375 on working expenses and \$904,824 on interest, redemption, and reserves. Sinking fund appropriations at 30 June 1970 were \$723,156. Replacement and contingencies reserve amounted to \$1,513,105.

The *Ballarat water supply district* comprises an area of about 65 square miles, containing a population of about 67,000. The total storage capacity of the 7 reservoirs is 5,435 million gallons and the catchment area is 24,182 acres. The capital cost of construction of the waterworks was \$6,365,863 to 31 December 1970. Loan liability amounted to \$4,097,291 at 31 December 1970, including loans due to the Government totalling \$3,563,547. Revenue for the year 1970 was \$553,606. Working expenses during 1970 amounted to \$282,398 and interest and other charges to \$270,114.

The *Ballarat sewerage district* comprises the City of Ballarat, the Borough of Sebastopol, and parts of the Shires of Ballarat, Bungaree, Buninyong, and Grenville. There are more than 231 miles of sewers. The capital cost of sewerage construction works to 31 December 1970 was \$6,120,274. Assessments in the sewerage district numbered 20,907 while those in sewered areas numbered 19,431. There were 16,906 buildings connected. Loan liability at 31 December 1970 amounted to \$5,192,098, redemption payments at that date totalled \$1,025,729. House connections financed by the Authority numbered 4,775. Revenue from rates during 1970 amounted to \$569,782, and expenditure, which included \$373,893 for interest and redemption, was \$574,763.

The *Latrobe Valley Water and Sewerage Board* constructs and operates water supply works within the Latrobe Valley. The Board supplies water from the Moondarra Reservoir on the Upper Tyers River to the Latrobe Valley area. The capacity of this storage is approximately 7,000 million gallons and water is conveyed from the reservoir, a distance of approximately 13 miles. The Board does not strike a water rate, but supplies consumers, including local water supply authorities, by measure. The quantity supplied during the year ended 30 June 1970 was 14,200 million gallons. The capital cost of water supply construction works to 30 June 1970 was \$11,598,656, and loan liability, due to the Government, was \$11,215,410.

The *Latrobe Valley sewerage system* consists of a main outfall sewer, about 52 miles in length, to convey wastes to an area where they are disposed of on land for agricultural purposes. No sewerage rate is levied, but a charge is made by measure for wastes received both from industries and public authorities. Effluent flows accepted from the various contributors averaged 6.67 million gallons per day. The capital cost of the sewerage construction works to 30 June 1970 was \$6,978,721 and loan liability due to the Government was \$6,217,122. Revenue in 1969-70 was \$1,265,165 and was derived from: water charges \$824,955, sewerage charges \$432,917, and works for other authorities \$7,293. Total expenditure in 1969-70 was \$1,049,138 including interest on loans \$415,175.

### Queensland

The *Brisbane City Council* operates the water supply and sewerage systems of the City of Brisbane, and also supplies, in bulk, the whole of the water used by the City of Ipswich and a portion of that used by the City of Redcliffe and Albert Shire Council. Redcliffe supplements its supply from that of the Pine Rivers Shire Council, while Albert also draws on its own reservoirs. Storage facilities for *Brisbane water supply* comprise the following (available capacities are shown in parentheses): Somerset Reservoir, 200,000 million gallons (67,500 million gallons); Lake Manchester, 5,720 million gallons (5,720 million gallons); Brisbane River, Mount Crosby Weir, 4 million gallons (4 million gallons); Clear Water Reservoir, Holt's Hill, 11 million gallons (11 million gallons); Enoggera Reservoir, 600 million gallons (600 million gallons); Gold Creek Reservoir, 400 million gallons (400 million gallons); Green Hill Reservoir, 17 million gallons (17 million gallons); Tarraginal Hill Reservoir, 13 million gallons (13 million gallons); and another nineteen service reservoirs totalling 41.09 million gallons capacity. The total number of service reservoirs for Brisbane Water Supply is 26, with a capacity of 72 million gallons. The Somerset reservoir is a dual purpose project with a designed total holding capacity of 200,000 million gallons, 67,500 million gallons to be for water storage and 132,500 million gallons for flood mitigation. The following table is a summary of operations of the complete Brisbane City Council system (Brisbane, Ipswich, Redcliffe, and portion of Albert Shire) for the years 1965-66 to 1969-70.

BRISBANE WATER SUPPLY(a): SERVICES, 1965-66 TO 1969-70

Year	Services connected	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of trunk and reticulation mains	
					Per service	Per head of estimated population		
			mil. gal	mil. gal	gallons	gallons	miles	
1965-66	. .	197,707	722,970	67.6	24,668	342	93.5	2,666
1966-67	. .	202,886	740,332	66.1	24,110	326	89.2	2,735
1967-68	. .	207,657	759,434	76.7	27,984	369	101.0	2,823
1968-69	. .	213,445	772,356	85.4	31,170	400	110.6	2,834
1969-70	. .	218,798	799,276	81.9	29,888	374	102.4	2,972

(a) Includes Ipswich, Redcliffe and portion of Albert Shire.

The sewage treatment works of the *Brisbane sewerage scheme* is situated at Luggage Point at the entrance to the Brisbane River. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1965-66 to 1969-70.

BRISBANE SEWERAGE: SERVICES, 1965-66 TO 1969-70

Year	Premises connected	Estimated population served	Total sewage pumped for the year	Length of main, branch, reticulation, etc. sewers
			mil. gal	miles
1965-66 . . .	90,940	336,478	8,821	1,341
1966-67 . . .	102,062	377,629	9,042	1,472
1967-68 . . .	109,364	404,647	8,358	1,607
1968-69 . . .	122,690	453,953	8,619	1,824
1969-70 . . .	143,245	530,007	9,313	2,048

*Brisbane City Council water supply and sewerage systems—finances.* The following table shows particulars of the finances of the water supply and sewerage undertakings of the Brisbane City Council for the years 1965-66 to 1969-70.

BRISBANE WATER SUPPLY AND SEWERAGE: FINANCES, 1965-66 TO 1969-70  
(\$'000)

Service and year	Gross capital cost to 30 June	Revenue	Expenditure		Total(a)	Surplus (+) or deficit (—)
			Working expenses	Interest, redemption, etc. charges		
Water supply—						
1965-66 . . .	54,635	8,365	3,069	2,503	8,471	— 106
1966-67 . . .	59,947	8,977	3,414	2,630	8,803	+ 174
1967-68 . . .	64,626	9,808	3,661	2,760	9,132	+ 676
1968-69 . . .	69,719	10,214	3,994	2,835	9,334	+ 880
1969-70 . . .	69,726	10,697	4,044	2,995	10,145	+ 552
Sewerage—						
1965-66 . . .	55,858	4,829	882	1,829	4,172	+ 657
1966-67 . . .	61,517	5,535	1,024	1,966	4,709	+ 826
1967-68 . . .	69,264	7,237	1,105	2,225	6,619	+ 618
1968-69 . . .	72,123	8,404	1,250	2,443	7,696	+ 708
1969-70 . . .	74,489	8,848	1,481	2,677	7,881	+ 967

(a) Total, including other expenditure.

*Country towns.* In addition to the City of Brisbane, there were at 30 June 1969, 245 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils. At 30 June 1969 there were 66 cities or towns in addition to Brisbane with sewerage systems. The receipts (other than loan and loan subsidy) of water undertakings controlled by the cities and towns referred to above amounted to \$10,345,587 in 1968-69. Expenditure amounted to \$10,717,951, including \$4,526,118 for debt charges. In addition, expenditure from loans and loan subsidy amounted to \$10,534,631. Finances of sewerage undertakings are incorporated in council general funds and are not available separately.

### South Australia

The water supply and sewerage systems in this State were constructed mainly, and are maintained by the Engineering and Water Supply Department, under the control of the Minister of Works. Works controlled by the Department are the Adelaide, Barossa, Beetaloo, Bundaleer, Moorook, Tod River, Warren, Yorke Peninsula, and other country water districts systems, the Morgan-Whyalla water supply system, the metropolitan and country sewerage systems, the Metropolitan Flood Waters



Scheme, and works on the River Murray constructed under the River Murray Waters Agreement. Several water supply schemes on the Murray River are administered by the Department of Lands in conjunction with irrigation works, and supplies to Woomera and Leigh Creek coalfield are controlled by the operating authorities.

*Adelaide waterworks.* At 30 June 1970 the Adelaide waterworks supplied districts covering 384 square miles of the metropolis and extending to near country areas. The capacity of reservoirs and storage tanks was 41,912 million gallons and there were 3,627 miles of metropolitan mains. The Mannum-Adelaide pipeline conveys water from the River Murray to Adelaide at a rate of up to 66 million gallons a day. Water is delivered to a terminal storage near Adelaide and thence to the metropolitan distribution system or alternatively it can be delivered into metropolitan reservoirs on the River Torrens or to reservoirs on the River Onkaparinga by further pumping. The pipeline also supplies various country areas along and extending from its route.

**ADELAIDE WATERWORKS: FINANCES, 1965-66 TO 1969-70**  
(\$'000)

Year	Invested capital at 30 June (a)	Revenue	Expenditure		Total	Surplus (+) or deficit (-)
			Working expenses (b)	Interest		
1965-66 . . . . .	98,056	9,521	5,292	4,248	9,540	- 19
1966-67 . . . . .	104,067	11,083	5,142	4,500	9,642	+ 1,441
1967-68 . . . . .	108,936	10,267	6,746	4,730	11,476	- 1,209
1968-69 . . . . .	114,121	10,793	5,552	4,919	10,471	+ 322
1969-70 . . . . .	123,817	12,722	6,236	5,399	11,636	+ 1,086

(a) After deduction of depreciation.

(b) Includes debt redemption.

*Adelaide metropolitan sewerage system.* The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg, Port Adelaide, Christies Beach, and Salisbury-Elizabeth areas of 197 square miles in all, includes treatment works at Glenelg, Port Adelaide, Bolivar, and Christies Beach. Financial and other particulars for 1965-66 to 1969-70 are shown hereunder.

**ADELAIDE METROPOLITAN SEWERAGE: SUMMARY, 1965-66 TO 1969-70**

Year	Length of sewers	Number of con- nections	Invested capital at 30 June(a)	Expenditure				Surplus
				Revenue	Working expenses (b)	Interest	Total	
	miles		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1965-66 . . . . .	1,952	213,375	56,235	6,386	2,614	1,561	4,175	2,211
1966-67 . . . . .	2,039	220,799	66,158	6,804	2,880	2,195	5,075	1,729
1967-68 . . . . .	2,125	227,489	74,808	7,156	3,375	2,822	6,197	959
1968-69 . . . . .	2,193	234,818	78,141	7,601	3,463	3,073	6,536	1,065
1969-70 . . . . .	2,276	244,239	84,080	8,644	3,716	3,601	7,317	1,327

(a) After deduction of depreciation.

(b) Includes debt redemption.

*Country sewerage schemes.* Sewerage schemes are operating at Port Lincoln, Naracoorte, Mount Gambier, Lobethal, Gumeracha, Nangwarry, Mount Burr, Myponga, Mannum, Whyalla and Angaston. At Port Lincoln and Mount Gambier the sewers discharge to ocean outfalls, and treatment works are used on the other systems. There are 277 miles of sewers and 14,705 connections in the country systems. Sewerage schemes for Port Pirie, Murray Bridge and Millicent are under construction and operating in part.



*Country water supply.* Water districts systems at 30 June 1970 comprised an area of 15,840,000 acres. Supply came from reservoirs having a total capacity of 21,186 million gallons, from the River Murray, and from underground sources. Apart from local supplies, water from the River Murray is distributed over wide areas through the Mannum-Adelaide, Morgan-Whyalla, Swan Reach-Stockwell and Tailem Bend-Keith pipelines and branches of these pipelines. The principal areas of underground supplies are in the south-east of the State, where water from the Murray Basin can be had at moderate depths or from lakes, and from sand beds on Eyre Peninsula. In the year 1969-70 supplies made to Mount Gambier, Naracoorte and other towns in the south-east amounted to 1,279 million gallons, and the Unley-Wanilla, Lincoln and Poldas Basins contributed 499 million gallons to the Tod River Water District.

**COUNTRY WATERWORKS, SOUTH AUSTRALIA: FINANCES, 1965-66 TO 1969-70**  
(\$'000)

Year	Invested capital at 30 June(a)	Revenue	Expenditure			Total	Deficit
			Working expenses (b)	Interest			
1965-66	103,772	3,872	4,553	4,128		8,681	4,809
1966-67	109,701	4,591	4,817	4,437		9,254	4,663
1967-68	117,541	4,340	5,262	4,954		10,216	5,876
1968-69	123,870	4,722	5,236	5,284		10,520	5,798
1969-70	130,870	5,117	5,840	5,969		11,809	6,692

(a) After deduction of depreciation.

(b) Includes debt redemption.

*Morgan-Whyalla water supply scheme.* This scheme, which has 223 miles of main via Port Augusta and 176 miles of main via the Spencer Gulf undersea crossing, was officially opened on 31 March 1944, the capital invested to 30 June 1970 being \$37,000,000. Apart from supplying Whyalla, the mains have been used to allow expansion of reservoir supplies in the northern agricultural area of the State, and to meet new demands caused by industrial growth at Whyalla, Port Pirie and Port Augusta. During 1969-70 water used from the scheme amounted to 4,779 million gallons.

#### Western Australia

The principal water supply systems of Western Australia are under the control of two State authorities, the Metropolitan Water Supply, Sewerage and Drainage Board and the Department of Public Works and Water Supply. The area which constitutes the territory administered by the Board encompasses approximately 1,270 square miles and extends from Perth southward to Rockingham and Serpentine, northward to Sorrento, and eastward to Sawyers Valley and Kalamunda. The Department of Public Works and Water Supply controls the Goldfields and Agricultural Water Supply and the Great Southern Towns Water Supply as well as 121 local water supplies (*see also* Chapter 24, Water Conservation and Irrigation). Four independent town schemes are controlled by local Water Boards in country areas, and individual water supplies serve railways, timber mill towns, isolated mines, pastoral properties, stock routes, and agricultural areas, mainly from dams, tanks, wells and bores.

*Metropolitan water supply, sewerage and drainage.* The sources of the metropolitan water supply are Serpentine Reservoir and Serpentine Pipehead Reservoir, Canning Reservoir, Wungong Brook Diversion Weir, Churchman Brook Reservoir, and Victoria Reservoir. The largest of these sources are the Serpentine Reservoir and the Canning Reservoir, which have a capacity of 39,000 million gallons and 20,550 million gallons respectively. Water from storages on the Darling Range is conveyed to service reservoirs to serve the City of Perth and the metropolitan area. A limited quantity of water is drawn from Mundaring Weir to serve sections of Greenmount, and to meet the peak demands of summer consumption supplies are supplemented from artesian bores, which can provide a daily maximum of 21 million gallons. The amount of bore water used is rarely more than 10 per cent of the metropolitan consumption and is usually considerably less.

The following table shows particulars of the *metropolitan water supply services* for 1965-66 to 1969-70.

**METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA: SERVICES  
1965-66 TO 1969-70**

Year	Number of services (a)	Average daily consumption	Total consumption for year	Average daily consumption per service (b)	Length of mains	Number of meters
		mil. gal	mil. gal	gallons	miles	
1965-66 . . .	158,675	59.5	21,707	380	2,654	139,435
1966-67 . . .	164,782	70.8	25,843	437	2,798	146,028
1967-68 . . .	173,068	68.2	24,958	403	2,923	152,603
1968-69 . . .	185,340	76.7	28,015	429	3,144	161,859
1969-70 . . .	193,359	87.2	31,820	458	3,317	171,346

(a) Figures relate to 30 June. (b) Calculated from averages for the year.

Some particulars of the *metropolitan sewerage and main drainage services* for 1965-66 to 1969-70 are shown in the following table.

**METROPOLITAN SEWERAGE AND MAIN DRAINAGE  
WESTERN AUSTRALIA: SERVICES 1965-66 TO 1969-70**

Year	Services	Length of sewers	Length of main drains
		miles	miles
1965-66 . . . . .	70,283	816	102
1966-67 . . . . .	71,188	848	109
1967-68 . . . . .	72,177	886	118
1968-69 . . . . .	74,018	931	126
1969-70 . . . . .	76,638	988	141

*Metropolitan Water Supply, Sewerage and Drainage Board—finances.* The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Board.

**METROPOLITAN WATER SUPPLY, SEWERAGE AND MAIN DRAINAGE  
WESTERN AUSTRALIA: FINANCES, 1965-66 TO 1969-70  
(\$'000)**

Service and year	Capital cost to 30 June	Revenue	Expenditure		Total	Surplus (+) or deficit (—) Total	
			Working expenses	Interest and debt redemption			
Water supply—							
1965-66 . . . . .	58,336	4,861	1,815	3,018	4,833	+	28
1966-67 . . . . .	62,137	5,551	2,307	3,061	5,368	+	183
1967-68 . . . . .	66,217	5,782	2,292	3,243	5,535	+	247
1968-69 . . . . .	74,078	7,162	2,322	3,510	5,832	+	1,331
1969-70 . . . . .	82,482	7,915	2,808	3,949	6,757	+	1,159
Sewerage—							
1965-66 . . . . .	24,243	2,823	1,336	1,176	2,512	+	310
1966-67 . . . . .	26,737	3,000	1,622	1,340	2,961	+	38
1967-68 . . . . .	29,286	3,198	1,689	1,474	3,164	+	34
1968-69 . . . . .	34,027	3,809	1,771	1,637	3,408	+	401
1969-70 . . . . .	40,821	4,162	1,983	1,867	3,850	+	313
Main drainage—							
1965-66 . . . . .	6,344	418	245	275	520	—	102
1966-67 . . . . .	6,956	629	298	319	617	+	12
1967-68 . . . . .	7,433	721	314	349	663	+	58
1968-69 . . . . .	8,657	872	327	375	702	+	170
1969-70 . . . . .	9,838	951	353	407	760	+	192

**Country water supplies.** Information relating to country water supplies is included in Chapter 24, Water Conservation and Irrigation.

### **Tasmania**

**Waterworks.** During the year 1969–70, water was supplied to approximately 112,000 properties which consumed almost 16,000 million gallons.

In Tasmania, water supply was once the exclusive responsibility of the city and municipal councils. In recent years, two semi-government authorities have been set up to operate bulk supply schemes for distribution by the local government authorities in the Hobart and Launceston areas, and directly to some industrial consumers. The North Esk Regional Water Supply Scheme is operated by the Rivers and Water Supply Commission as a State concern, supplying bulk water to the municipalities of St Leonards, George Town, Lilydale, and portion of Westbury. This scheme supplies water to industries situated near the Tamar River. Also vested in the Commission is the West Tamar Water Supply Scheme which serves the Municipality of Beaconsfield, and is operated by the Beaconsfield Council as the agent of the Commission. The over-all control of water supply in the greater Hobart area, comprising the municipalities of Hobart, Clarence, Glenorchy, and Kingborough, is vested in the Metropolitan Water Board, but the municipalities retain primary responsibility for reticulation. The Board has constructed a large pumping station at Bryn Estyn, near New Norfolk, which supplies bulk water from the Derwent River to the metropolitan area and has a pipeline capacity of 20 million gallons a day. In addition, the Board also controls the Southern Regional Water Supply Scheme with a pipeline capacity of 6.9 million gallons a day which supplies water to Hobart's eastern shore and nearby towns.

**Sewerage.** At the end of 1969–70 the number of tenements connected to sewerage services was about 78,000, about 60 per cent of sewerage discharge is subject to treatment.

### **Northern Territory**

Information relating to water supply in the Northern Territory may be found in Chapter 24, Water Conservation and Irrigation.

### **Australian Capital Territory**

The water supply, sewerage and drainage systems in the Australian Capital Territory are under the control of the Commonwealth Department of Works. The sources of the water supply are: Cotter Dam (capacity 1,034 million gallons), Bendora Dam (2,360 million gallons) and Corin Dam (capacity 16,600 million gallons). Water is fed from Bendora Dam by gravity to 20 major reservoirs. The maximum daily supply is 45.9 million gallons. An alternative supply is available from 9 pumps at the Cotter Dam at a rate of 38.5 million gallons per day.

The total population served in the Australian Capital Territory, which during 1969–70 consumed 5,439.1 million gallons of water, was 127,000 (at 31 December 1969). In addition, the Canberra water supply system supplied 371 million gallons of water to Queanbeyan, New South Wales. The total number of water meters at 30 June 1970 was 34,021 and the total length of water lines was 689 miles.

The sewerage system for Canberra suburbs has three treatment works: the Weston Creek works provide for 105,000 persons, the Fyshwick works provide for 10,000 persons and the Belconnen works provide for 15,000 persons. There were 654 miles of sewerage, and 9 miles of sewer rising mains (at 30 June 1970). There were also 659.1 miles of storm-water drains.

## **Harbour boards and trusts**

The number and net tonnage of vessels which entered the major ports in each State during the years 1968–69 and 1969–70 are shown in Chapter 12, Transport, Communication and Travel (*see* page 332). Particulars of overseas and interstate cargo discharged and shipped are shown on pages 333–4 of the same chapter.

### **New South Wales**

*The Maritime Services Board of New South Wales* exercises general control over intra-state shipping, including the survey and certification of vessels, the licensing of harbour craft and the examination and issue of certificates to officers. It is responsible for the provision of pilotage services, lights, beacons, buoys and other port facilities, imposes and collects rates and charges on goods and vessels, and is vested with the general control and management of the navigable waters and ports within the State. At the ports of Sydney, Newcastle and Botany Bay the Board is also responsible for the provision of adequate wharfage and channels and carries out all construction, maintenance and dredging work.



*Port of Sydney.* The entrance to Sydney Harbour, the principal port of New South Wales, is nearly a mile wide, and the depth of its navigable channel is not less than 80 feet. Between the entrance, known as 'The Heads', and the Harbour proper, a distance of four miles, there are two separate channels, each 700 feet wide, the Western Channel not less than 45 feet deep (low water ordinary spring tide) and the Eastern Channel 42 feet deep. The foreshores are 152 miles in length, and the total area of the port is 13,600 acres, of which about one-half has a depth of 30 feet or more at low water ordinary spring tide. The mean range of tides is 3 feet 6 inches.

The wharves are situated close to the business centre of the city, about four or five miles from the Heads. At 30 June 1970 there were 5 dolphin berths, 3,350 feet long, and 83 effective commercial cargo berths, with a total length of 42,192 feet, controlled by the Board. Accommodation for harbour craft amounts to 2,245 feet, while the length of other berths, including oil and private wharves, totals 28,623 feet. Depth of water at wharves is up to 43 feet. Special facilities for the storage and handling of products such as wheat, wool, coal, etc. are provided. Docking facilities are available for large vessels at the Captain Cook Graving Dock. Containers facilities became available in March 1969 with the opening of the eastern section of the Balmain container terminals to cellular container vessels.

*Port of Newcastle.* Shipping at Newcastle is concerned primarily with the coal, iron and steel and other heavy industries located in the district. However, facilities are available for the shipment of wool, wheat and frozen meat, and a wharf is available for timber. The area used by shipping is about 570 acres, excluding the entrance to the harbour and the inner basin, which together cover an area of 162 acres. The width of the harbour at the entrance is 1,200 feet, and the navigable channel, with a depth of 36 feet at low water, is 500 feet wide. Wharfage accommodation amounts to approximately 15,000 feet, including about 3,000 feet of privately owned wharfage. A floating dock of 9,300 tons capacity is available at the port and a coal loading plant capable of loading at the rate of 2,000 tons an hour is now operating. The bulk berth which recently became operative at Kooragang is equipped with two grab unloaders each with a nominal capacity of 650 tons an hour. A general cargo berth in Throsby Basin is to be equipped with a 26 ton crane capable of handling standard containers. A new silo berth is on the western side of Carrington Basin capable of loading at the rate of 4,000 tons per hour.

*Botany Bay.* The Maritime Services Board of New South Wales is the administrative and controlling authority. The port is primarily a discharging centre for the oil refinery at Kurnell, near Sydney, and one jetty with a tanker berth each side of the jetty is available as well as three tanker offshore moorings with submarine pipelines. The entrance to the Bay is approximately one and a quarter miles wide, with a minimum depth of 50 feet and about 42 feet in the dredged swinging basin.

*Port Kembla* is the port of the southern coalfields and for the major industrial areas in and about Wollongong. The port has an area of approximately 340 acres, with depths ranging from 20 to 50 feet (low water ordinary spring tide), and wharfage accommodation totalling 6,600 feet is provided for shipping. No cargo sheds are available, as the nature of the trade at the port does not call for the provision of sheltered storage accommodation. The Inner Harbour, which at present covers an area of approximately 110 acres, contains 2,550 feet of wharfage with depths alongside ranging from 35 to 38 feet. The facilities include a 2,000 tons per hour coal loader and a roll-on/roll-off berth. An 800 feet berth is under construction.

*Other ports.* In addition to the port of Sydney, Newcastle, Port Kembla, and Botany Bay, the Board controls 29 outports along the coastline of 609 miles. The shipping trade of these outports is relatively small.

*Port charges.* The port charges payable in respect of shipping and ships' cargoes in New South Wales are imposed by the Commonwealth Government in terms of the Lighthouses Act and the Navigation Act, and by the State authorities under the Navigation Act of New South Wales, the Harbour and Tonnage Rates Act, and the Sydney Harbour Trust Act. Since 1 February 1936 the State enactments have been administered by the Maritime Services Board. The total revenue collections by the Maritime Services Board amounted to \$33,143,000 in 1969-70. This figure includes the revenue for the ports of Sydney, Newcastle and Botany Bay.

Financial details relating to these three ports are shown in the following table.



**MARITIME SERVICES BOARD FUND: FINANCES OF THE PORTS OF SYDNEY  
NEWCASTLE AND BOTANY BAY, 1965-66 TO 1969-70**  
(\$'000)

Year	Revenue				Expenditure(a)				Surplus
	Wharfage and transhipment rates	Tonnage rates and berthing charges	Other charges	Total	Administration and maintenance	Interest, debt redemption, exchange, etc.	Total		
1965-66	10,711	1,832	3,980	16,523	9,512	6,916	16,428	95	
1966-67	11,501	1,895	4,282	17,678	9,476	8,113	17,589	89	
1967-68	12,664	2,024	5,645	20,333	10,830	9,451	20,280	53	
1968-69	13,580	2,085	7,294	22,959	12,150	10,716	22,866	93	
1969-70	14,854	2,271	7,871	25,000	12,816	12,120	24,937	64	

(a) Excludes capital expenditure but includes transfers to the Renewals Fund Reserve Account (\$3,060,000 in 1965-66, \$3,975,000 in 1966-67, \$4,940,000 in 1967-68, \$5,800,000 in 1968-69 and \$6,760,000 in 1969-70)

### Victoria

The *Port of Melbourne* comes under the control of the Melbourne Harbour Trust Commissioners, a financially independent statutory organisation, with a full-time chairman and five part-time commissioners. The area of water and land under the control of the Trust is ten and a half square miles, with sheds available for cargo in transit totalling 22,928 feet in length and covering an area of about 43 acres. Three of the largest transit sheds on the Australian coast are in operation at Appleton Dock. The sheds are 600 feet long by 150 feet wide, each with a cargo stacking area of 81,000 square feet. The berths are used for conventional general cargo trade as well as the unit-load container handling for general cargo in the overseas trade. The total length of wharves, piers and jetties in the port is 61,550 feet, covering an area of about 59 acres with 56,940 feet of effective berthing space.

In line with world-wide changes in cargo handling methods, current planning and construction in the Port of Melbourne are almost exclusively devoted to facilities catering for container ships and cargo as well as for the multi-purpose unit-load container conventional ships and cargo. The port's first overseas container terminal, Swanson Dock, which has 1,600 feet of concrete wharf apron with 24 acres stacking area behind the berth, was officially opened on 7 March 1968. Of the two additional 800 feet long 'common user' container berths on the east side of Swanson Dock one is expected to be completed in 1971 and the other in 1972. Two roll-on/roll-off container unit-load berths were completed in early 1969, one at North Wharf for the trans-Tasman trade to New Zealand, having a 580 feet wharf apron and 3.3 acre stacking area behind the berth and the other at Webb Dock, with a 600 feet wharf apron and additional 11.3 acre stacking area for the eastern seaboard trade.

The depth of water (low water ordinary spring tide) from the main channels to the principal wharves is 31 to 37 feet.

The following table shows particulars of the financial operations of the Trust.

**MELBOURNE HARBOUR TRUST: FINANCES, 1966 TO 1970**  
(\$'000)

Year	Gross loan indebtedness at 31 December	Expenditure							Total	Surplus
		Revenue	Wharfage and tonnage rates	Total	Operation, administration and maintenance	Interest, debt redemption, exchange, etc.	General reserve, depreciation, renewals and insurance account			
1966 . .	32,229	6,393	10,695	6,235	1,712	2,583	10,530	165		
1967 . .	34,484	6,692	11,322	6,441	2,142	2,567	11,150	172		
1968 . .	36,029	8,357	13,573	6,972	2,381	4,002	13,355	218		
1969 . .	37,888	8,901	14,321	7,903	2,127	4,049	14,079	242		
1970 . .	40,690	9,475	15,047	8,512	2,869	3,419	14,800	247		

The *Port of Geelong* operated by the Geelong Harbour Trust, has available 17 effective berths, plus 2 berths at the Commonwealth Explosives Pier, Point Wilson, owned and operated by the Commonwealth. Two modern dry bulk berths (Lascelles Wharf Nos 1 and 2 berths) became fully operational in 1970 and a roll-on/roll-off berth at Corio Quay came into operation in January 1971. The Trust operates its own towage fleet of six tugs, the largest of 1,900 b.h.p. Eight berths have a depth of 36 feet at low water; all other berths (except Commonwealth Explosives Pier, Point Wilson and Point Henry Pier, 30 feet) have a depth of 32 feet at low water. Revenue for the year 1969 was \$3,450,641, and expenditure from revenue totalled \$2,541,678. At 31 December 1969 the value of the Trust's fixed assets was \$26,620,477 and loans outstanding amounted to \$8,093,615.

The *Port of Portland* provides unimpeded access for large ocean-going vessels to the entrance of a 250-acre harbour basin having a minimum depth of 36 feet of water under all tidal conditions. Since the new all-weather deep-sea port was completed to operational standards during 1960 an oil tanker berth has been commissioned and a new bulk berth completed for the handling of dry bulk commodities. A 1.25 million bushel bulk grain terminal opened during 1965 has since been doubled and a 4 million bushel horizontal wheat storage erected for use by the Victorian Grain Elevators Board. During 1969-70, the construction of a transit shed on No. 1 berth, the completion of an oil-fired incinerator to safely dispose of ship's garbage and the arrival on station of a new 1,600 h.p. ocean-going tug were projects that will provide valuable facilities in the future.

Operating revenue and expenditure for the year ended 30 June 1970 were \$873,031 and \$500,576 respectively. The value of the Trust's fixed assets, less depreciation, was \$19,794,812 at 30 June 1970, and loans and advances outstanding amounted to \$20,165,225.

### Queensland

The ports of Queensland, except Brisbane and certain minor ports, are administered by harbour boards with members representing the towns and districts served by the ports. Brisbane and the minor ports are controlled by the State Treasury through the Department of Harbours and Marine, which supervises the engineering activities of the other ports.

*Brisbane.* Brisbane, in its dredged and improved river, accommodates comfortably the largest vessels in the Australian trade. The main centres for shipping, although further downstream than formerly because of the increasing size of vessels, are still within easy access of the city. Adequate dry-docking facilities are available. The finances of Brisbane Harbour for the years 1965-66 to 1969-70 are shown in the following table.

BRISBANE HARBOUR: FINANCES, 1965-66 TO 1969-70  
(\$'000)

Year	Loan indebtedness at 30 June	Receipts		Payments		
		Harbour dues	Total	Working expenses(a)	Total	
1965-66	4,787	2,094	3,121	2,157	2,498	
1966-67	4,636	2,044	2,987	2,228	2,561	
1967-68	4,504	2,019	3,475	3,039	3,376	
1968-69	4,890	2,333	3,622	3,156	3,483	
1969-70	5,726	2,320	3,772	4,542	4,927	

(a) Excludes interest and redemption included in total.

In addition to Brisbane harbour, the Department of Harbours and Marine also controls the Brisbane Dry Dock, the Cairncross Dock, and twelve smaller harbours not administered by harbour boards.

*Harbour boards.* Harbour boards control the ports of Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton, and Townsville. Finances for each port for the year ended 30 June 1969 are shown on page 623, together with a summary for the years ended 30 June 1965 to 1969.

**HARBOUR BOARDS, QUEENSLAND: FINANCES, 1964-65 TO 1968-69**  
(\$'000)

Harbour board	Revenue		Expenditure (excluding loan)		Total including interest and redemption (a)	Surplus (+) or deficit (-)
	Loan indebtedness at 30 June	Wharfage and harbour dues	Total	Working expenses		
Bowen . . . . .	549	33	49	37	50	- 1
Bundaberg . . . . .	6,083	611	990	234	945	+ 45
Cairns . . . . .	6,803	620	1,469	587	1,265	+204
Gladstone . . . . .	7,561	888	1,543	142	1,443	+100
Mackay . . . . .	4,039	550	1,416	567	1,302	+114
Rockhampton . . . . .	4,737	147	222	74	238	- 16
Townsville . . . . .	8,851	1,154	2,629	599	2,534	+ 95
Total, 1968-69 . . . . .	38,623	4,003	8,318	2,240	7,777	+541
1967-68 . . . . .	37,173	3,480	7,296	2,080	7,117	+179
1966-67 . . . . .	36,384	3,109	8,372	1,876	8,201	+171
1965-66 . . . . .	35,436	2,524	8,862	1,792	9,088	-226
1964-65 . . . . .	33,824	2,412	6,337	1,398	6,169	+168

(a) Includes expenditure on capital works from accumulated revenue.

**South Australia**

*Department of Marine and Harbors.* All South Australian harbours are controlled by the Department of Marine and Harbors, which is responsible to the Minister of Marine for the discharge of its duties and functions. The most important ports are the six deep-sea ports of Port Adelaide, Port Pirie, Wallaroo, Port Lincoln, Port Giles and Thevenard. In South Australia there are also eight privately-owned and operated ports. The principal of these are Whyalla, Ardrossan, Rapid Bay, and Proper Bay (Broken Hill Pty Co. Ltd), Port Augusta (Commonwealth Railways) and Port Stanvac (Petroleum Refineries (Aust.) Pty Ltd). Maximum depths of water (low water) at the wharves of the main ports range from 27 feet at Port Pirie to 35 feet at Port Adelaide. The following table shows the finances of the Department for 1965-66 to 1969-70.

**DEPARTMENT OF MARINE AND HARBOURS, SOUTH AUSTRALIA: FINANCES**  
1965-66 TO 1969-70  
(\$'000)

Year	Loan indebtedness at 30 June	Expenditure from revenue				Surplus
		Revenue	Working expenses	Interest	Total	
1965-66 . . . . .	43,172	6,194	3,941	1,734	5,675	519
1966-67 . . . . .	44,264	6,734	4,019	1,807	5,827	907
1967-68 . . . . .	45,478	6,418	4,196	1,869	6,065	352
1968-69 . . . . .	47,614	6,653	4,365	1,957	6,322	331
1969-70 . . . . .	50,736	7,282	4,265	2,176	6,442	840

**Western Australia**

The Port of Fremantle is operated and controlled by the Fremantle Port Authority. The port covers an extensive water area of some 180 square miles and comprises an inner and an outer harbour. The inner harbour includes 20 deep-water land-backed berths, providing more than 665,450 square feet of covered storage space and 12,677 feet of wharf berth accommodation. All inner harbour berths are dredged to a low water depth of 36 feet. The outer harbour includes 3 main anchorages, Gage Roads, Owen Anchorage and Cockburn Sound. Deep-water jetties, including the oil refinery jetty in Cockburn Sound, are available in the outer harbour. Ocean-going deep draft ships enter the Sound by means of a channel dredged through Success and Parmelia Banks to a low water depth of 45 feet and a bottom width of 500 feet. In the outer harbour there are 3 tanker berths each with a low water depth of 44 feet at the Kwinana oil refinery, 2 berths at the nearby steelworks jetties with a low water depth of 38 feet, 2 berths at the alumina works jetty with a low water depth of 40 feet and 1 berth at the bulk cargo jetty with a low water depth of 44 feet. There is also a special



berth for the handling of explosives. Total effective berth accommodation in the outer harbour is 7,530 feet. Gross earnings for 1969-70 amounted to \$9,919,993, working expenses to \$6,946,102, interest charges on loan capital \$988,331, and loan indebtedness totalled \$22,538,912.

The *Port of Albany* is controlled by the Albany Port Authority. The depth of water in the entrance channel is 33 feet, at one arm of the jetty 31 feet and at the other arm 33 feet. In the approaches to wharf berths the depth is 33 feet. Berthing accommodation totals 3,363 feet, comprising 1,113 feet at the wharf berths and 2,250 feet at the Deepwater Jetty. Gross earnings for the year 1969-70 amounted to \$513,308, working expenses \$206,723, interest charges \$250,073, and loan indebtedness totalled \$4,713,327.

The *Port of Bunbury* is controlled by the Bunbury Port Authority. The depth of water in the harbour is 30 feet and berthing accommodation is 4,808 feet. Gross earnings for the year 1969-70 amounted to \$835,796, working expenses \$283,220, interest on loan capital \$397,138, and loan indebtedness totalled \$7,549,446.

The *Port of Esperance* is controlled by the Esperance Port Authority. Three berths provide a total length of 1,920 feet with a minimum depth alongside of 31 feet 6 inches. Bulk handling facilities are provided for petroleum products, grain, and minerals, including salt, nickel and copper. Gross earnings for the year 1969-70 were \$417,936, working expenses \$115,592, interest charges \$180,814, and loan indebtedness totalled \$4,177,726.

The *Port of Geraldton* is controlled by the Geraldton Port Authority. Four land-backed berths have a total length of 2,238 feet with a minimum depth alongside of 30 feet and a tide rise of 2 feet 6 inches. The grain terminal provides storage for 5,200,000 bushels and permits ships to be loaded at the rate of 800 tons per hour. The iron ore berth is associated with a privately-operated ore stockpile and automatic conveyor system with a rated capacity of 1,200 tons per hour. Gross earnings for the year 1969-70 were \$643,005, working expenses \$190,786, interest charges \$274,566, and loan indebtedness totalled \$5,511,687.

*Other ports.* The following ports are controlled by the State Government Harbour and Light Department: Broome, Busselton, Carnarvon, Derby, Onslow, Point Samson, Port Hedland, and Wyndham. Ports privately controlled comprise Yampi and Dampier, both operated by iron ore mining companies, and Exmouth, the port serving the communications installation at North West Cape. A private buoyed sea terminal is operated at Barrow Island for the shipment of crude oil, and private interests ship salt at Cape Cuvier, and salt and gypsum from Useless Loop in Shark Bay.

### Tasmania

There are nine port authorities: the marine boards of Hobart, Devonport, Burnie, Circular Head (Stanley), King Island (Currie), Strahan and Flinders Island (Whitemark); also the Port of Launceston Authority and the Smithton Harbour Trust. The ports at Hobart, Launceston, Burnie and Devonport are terminals for overseas shipping. Port Latta in Circular Head's area is a specialised port for the shipment overseas of iron ore pellets, the loading point lying a mile out to sea in over 50 feet of water.

### AUTHORITIES CONTROLLING PORTS, TASMANIA: FINANCES

1965-66 TO 1969-70

(\$'000)

Authority	Loan indebtedness at 30 June (a)	Receipts (revenue account) Total	Expenditure (revenue account)		Total (b)	Surplus (+) or deficit (-)	Loan expenditure
			Works and Services	Loan charges			
Hobart	3,394	1,896	979	357	1,688	+208	221
Launceston	5,200	2,090	1,326	447	2,102	- 12	1,009
Devonport	6,404	1,186	389	562	1,110	+ 76	598
Burnie	11,554	1,390	246	851	1,225	+165	1,259
Circular Head	501	76	14	49	75	+ 1	71
King Island	83	59	40	9	54	+ 5	2
Strahan	140	39	20	18	46	- 7	23
Flinders Island	189	29	36	7	46	- 17	203
Smithton	..	1	1	..	3	- 2	..
<b>Total, 1969-70</b>	<b>27,464</b>	<b>6,765</b>	<b>3,051</b>	<b>2,300</b>	<b>6,347</b>	<b>+418</b>	<b>3,386</b>
1968-69	24,376	6,274	2,817	2,011	6,253	+ 21	4,574
1967-68	22,249	5,953	2,272	1,921	5,433	+520	2,395
1966-67	20,361	5,628	2,711	1,646	5,333	+295	2,184
1965-66	18,622	5,541	2,557	1,504	5,147	+394	1,846

(a) The total of new loans raised during 1969-70 was \$3,909,500, of which Hobart raised \$850,000, Launceston \$979,500, Devonport \$850,000, Burnie \$950,000, Circular Head \$85,000, Strahan \$130,000 and Flinders Island \$190,000.

(b) Includes expenditure not specified in component items.



## Fire brigades

### New South Wales

A Board of Fire Commissioners, consisting of six members, two appointed by the State Government (President and Deputy President) and one each representing insurance companies, local government authorities, volunteer firemen, and permanent firemen, operates under the Fire Brigades Act, 1909-1970, and 167 fire districts had been constituted at the end of 1969. The cost of maintenance of fire brigades is borne in proportions of local councils and the Government each one-eighth, and the insurance companies three-quarters.

At 31 December 1969 the actual strength of the Fire Brigade throughout the fire districts of New South Wales was 452 officers and 1,300 permanent and 2,673 volunteer firemen. Corresponding figures for the Sydney Fire District were 383, 1,194 and 257. The revenue for the year 1969 was \$11,913,000, as follows; from the Government \$1,471,000; municipalities and shires, \$1,471,000; fire insurance companies and firms, \$8,825,000; and from other sources, \$147,000. The disbursements for the year were \$11,913,000. The Board of Fire Commissioners provides the fire protection services for Canberra, in the Australian Capital Territory, and the cost of these services is reimbursed by the Commonwealth Government.

Under the Bush Fires Act, 1949-1970 a Bush Fire Fighting Fund exists from which finance is provided for the prevention and fighting of bush fires. Contributions to the Fund by the Government, councils and insurance companies are in the proportion of one-quarter, one-quarter and one-half, respectively. At 30 June 1970 Volunteer Brigades equipped by means of this fund numbered 2,500 with an active membership of about 75,000 persons. The approved expenditure from the Fund for equipment, up to 30 June 1971, amounted to \$13,480,000.

### Victoria

In Victoria, fire brigades are controlled by the Metropolitan Fire Brigades Board consisting of ten members, including an employees' representative, and the Country Fire Authority consisting of eleven members.

*Metropolitan Fire Brigades Board.* The Metropolitan Fire Brigades Board receives contributions from the municipalities and the insurance companies in the proportion of one-third and two-thirds respectively. At 30 June 1970 the Board had under its control 45 stations, 1,166 permanent staff, and 266 special service and clerical, etc. staff. The total receipts for 1969-70 were \$8,306,184, comprising contributions \$7,204,800, receipts for services \$730,606, and interest and sundries \$370,778. The expenditure was \$8,386,393.

*Country Fire Authority.* This authority is responsible for the prevention and suppression of fires in the 'country area of Victoria', which embraces the whole of the State outside the Metropolitan Fire District, excluding State forests, National Parks and certain Crown lands. The country area has been divided into twenty-five fire control regions, four of which (Ballarat, Bendigo, Geelong and the Dandenong, Chelsea and Frankston areas) are wholly urban and the remainder mixed urban and rural. The Country Fire Authority receives contributions in the proportion of two-thirds from insurance companies and one-third from the Treasury. At 30 June 1970 the Country Fire Authority Act applied to 188 insurance companies and 211 urban and 1,050 rural fire brigades. The effective registered strength of the brigades was 112,635 members. Income for the year 1969-70 amounted to \$3,793,081. Total expenditure other than loan redemption and capital expenditure amounted to \$3,442,747.

### Queensland

There are two controlling bodies responsible for fire fighting services throughout Queensland. The State Fire Services Council controls brigades set up under *The Fire Brigades Acts* 1964 to 1966, and the Rural Fires Board under provisions of *The Rural Fires Act*, 1946 to 1968 administers Bush Fire Brigades. In addition a Local Authority may establish a fire fighting brigade of its own as do some major establishments such as the State Forestry Department and private companies whose activities involve fire hazards.

Fire districts are constituted under '*The Fire Brigades Acts*, 1964 to 1966'. For each district, there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows: Treasury one-eighth, insurance companies three-quarters, and local authorities one-eighth. The insurance companies' contribution is paid to the State Government and thence to fire brigades.

At 30 June 1970 there were 81 Fire Brigade Boards. The number of stations was 178 and full-time staff numbered 1,181, comprising 62 administrative, 279 officers and 840 firemen. Volunteers numbered 34. Part-time staff numbered 1,224 comprising 68 administrative, 131 officers and 1,025

firemen. The total revenue for the year 1969-70 was \$6,725,740, received mainly from the following sources: Government \$805,699, local authorities \$805,699, insurance companies \$4,834,193. Loan receipts (Government and other) were \$357,413. The total expenditure for the year was \$6,534,476, the chief items being salaries and wages \$4,762,197, and interest and redemption of loans \$618,650.

The Rural Fires Board consists of a chairman and nine members all, except the one representing the United Graziers Association, are appointed by the Governor-in-Council from Government Departments and the Minister of Lands has power to add up to three additional members from the community as a whole. For administrative purposes the State is divided into Rural Fire Districts under the control of a Chief Fire Warden and in these districts Fire Wardens are appointed to assigned areas. These officers co-ordinate and control the Bush Fire Brigades on a voluntary basis. At 30 June 1970 there were 172 Rural Fire Districts with over 1,500 voluntary Fire Wardens and Bush Fire Brigades numbered 977. Expenditure by the State Government during 1969-70 amounted to \$79,259.

### South Australia

The Fire Brigades Act, 1936-1958 provides for a board of five members, that the expenses and maintenance of brigades are defrayed in the proportion of two-ninths by the Treasury, five-ninths by insurance companies and two-ninths by the municipalities concerned, and that when the Treasury proportion exceeds its statutory contribution of approximately \$31,000, the excess is borne five-sevenths by insurance companies and two-sevenths by the municipalities. At 30 June 1970 there were altogether 38 fire brigade stations, of which 16 were metropolitan and 22 country.

The strength of the permanent staff at 30 June 1970 was 558, comprising 390 officers and men, 108 country auxiliary firemen and 60 other employees (including maintenance workers). The total revenue for the year 1969-70 was \$2,042,139, including contributions of \$1,755,540 made up as follows: insurance companies \$1,056,338, Treasury \$276,667 and municipalities \$422,535. The Treasury contribution includes a special grant of \$245,649.

### Western Australia

By the provisions of the *Fire Brigades Act*, 1942-1966 certain local government areas are constituted fire districts under the control of the Western Australian Fire Brigades Board. There were 59 fire districts at 30 June 1969. The contribution to the Board is made in the proportion of 16 per cent from the Government, 20 per cent from local government authorities, and 64 per cent from insurance companies. The number of local government authorities and insurance companies who contributed numbered 79 and 183 respectively. Fifteen permanent and two volunteer brigades operate in the metropolitan fire district centred on the City of Perth. Permanent brigade personnel serve with volunteer brigade personnel in five large country centres and volunteer brigades provide town fire protection at some fifty other centres. At 30 June 1970 the Board had 459 employees and there were 1,441 volunteer brigade officers and firemen. The revenue for the year ended 30 June 1970 was \$3,038,689 and the expenditure \$2,938,724.

Under the *Bush Fires Act*, 1954-1970 a Bush Fires Board, consisting of thirteen members, six of whom are nominated by the Country Shire Councils' Association, was set up to advise the Minister for Lands on bush fire control and to administer the Bush Fires Act. The Act also provides for the registration of bush fire control officers, who numbered 2,371 at 30 June 1970, and the establishment of bush fire brigades, 948 at 30 June 1970. Many individual brigades are large organisations with numerous self-contained sections.

### Tasmania

The *Fire Brigades Act* 1945 provided for the creation of the Fire Brigades Commission of Tasmania to co-ordinate the activities of existing fire brigade boards, while leaving the responsibility for individual control and management with the boards. The Commission comprises the following: two persons nominated by the Minister; one person representing the City or Municipal Councils; one person nominated by the Chairman of the Rural Fires Board; and three persons representing the insurance companies. Contributions towards the cost of operations are on the basis of 22.5 per cent each from the Treasury and the municipalities and 55 per cent from the insurance companies concerned. The cost for the year 1969-70 amounted to \$1,105,361. There were, at 30 June 1970, 28 boards controlling 38 stations, and their aggregate staffs numbered 683 (officers and firemen), comprising 222 permanent firemen, 421 part-time firemen and 40 volunteers; the volunteers all operate under the Hobart Board in the forested and mountainous Fern Tree area.

## CHAPTER 20

### EDUCATION, CULTURAL ACTIVITIES, AND RESEARCH

For the most recent statistics available on subjects dealt with in this chapter reference should be made to the series of mimeographed bulletins on *Social Statistics* issued by this Bureau. The *Quarterly Summary of Australian Statistics* contains summarised information on these subjects, and financial aspects are dealt with in the annual bulletins *Commonwealth Finance* and *State, Territory and Local Government Authorities' Finance and Government Securities*. The Annual Reports of the respective State education departments provide detailed statistical and other information about particular States. Publications on education in Australia, secondary schooling, and other topics are issued by the Commonwealth Department of Education and Science.

#### EDUCATION

An account of the development of the Australian school system up to 1929 may be found in Year Book No. 22. In Year Book No. 40 a review of changes which occurred up to 1951 and of the practices then current was presented. The present situation is summarised in the early part of this chapter, in textual material provided by the Commonwealth Department of Education and Science.

#### Education in Australian schools

##### Administration and organisation

In Australia the provision of schools is mainly the responsibility of State governments. During the nineteenth century all six Australian colonies had established systems of compulsory education, beginning with the *Education Act* 1872 in Victoria, and followed by similar Acts in Queensland (1875), South Australia (1875), New South Wales (1880), Tasmania (1893), and Western Australia (1893). After Federation in 1901 education was one of the responsibilities retained by the States, and these acts, with subsequent amendments, constitute the legal basis of compulsory education in the Australian States today. The Commonwealth has responsibilities for the provision of education facilities in the Northern Territory and the Australian Capital Territory. The government school system in the Australian Capital Territory is staffed by the New South Wales Department of Education and follows the educational syllabus of that State, the cost being recovered from the Commonwealth Government. Until 1970, a similar arrangement existed with the South Australian Department of Education in the operation of schools in the Northern Territory, but the Commonwealth Government has now established a Commonwealth teaching service to recruit and train teachers for the Northern Territory. The Commonwealth also provides direct financial assistance in various forms to schools throughout Australia.

School attendance is compulsory throughout Australia between the ages of six and, at least, fifteen. The minimum leaving age is fifteen years in New South Wales, Victoria, Queensland, and South Australia, and sixteen years in Tasmania, while in Western Australia attendance is compulsory until the end of the year in which the child turns fifteen years. The Education Acts require that all children between the prescribed ages must attend either a government school or some other recognised educational institution. Children may be exempted from the requirement of compulsory attendance if they live too far from a school or suffer a physical disability. These children usually receive correspondence tuition.

The school year in Australia begins at the end of January or early in February; it ends in mid-December. The long vacation is taken over the summer months (December to February) and two short vacations divide the school year into three terms.

At government primary schools it is usual for both boys and girls to attend the same school; at the secondary level practices vary, but the trend is towards co-educational schools. Non-government secondary schools cater mainly for boys and girls separately but recently a few major independent schools have become co-educational.

##### Government school systems

Although the educational systems in the six States are not identical, they have many similar features. Responsibility for framing educational policy and having it put into effect rests with a Minister for Education, who is a member of the State Cabinet. The administrative authority in



each State is an education department headed by a Director-General of Education. Separate divisions of the education department in each State administer primary, secondary and technical education (in New South Wales there is a separate Department of Technical Education). Other divisions look after such matters as the recruitment and training of teachers, pupil guidance, research, and the education of atypical children. In New South Wales and Queensland, administration has been decentralised to a degree by the appointment of directors who are responsible for policy in the area which they control.

Tuition at government primary and secondary schools is free in all States. Parents are usually expected to bear the cost of textbooks, uniforms and charges for such things as the use of sports materials. However, income tax concessions exist in respect of these expenditures for both government and non-government systems, and certain textbook costs are subsidised in the case of pupils attending government and non-government schools in some States.

### Non-government school systems

Approximately 22 per cent of Australian school children were enrolled at non-government primary and secondary schools in 1970, and about 81 per cent of these attended Roman Catholic schools. The majority of other non-government schools, sometimes known as 'private' or 'independent' schools, are conducted by, or are under the auspices of, various other religious denominations, particularly the Church of England, Presbyterian and Methodist Churches. A few non-government schools are undenominational and are conducted under the auspices of corporate bodies. Non-government schools follow curricula similar to those laid down by State education departments, and prepare their pupils for examinations conducted by public examining bodies.

The methods adopted by the education authorities to ensure an acceptable standard of education at non-government schools vary from State to State. In New South Wales, Victoria, South Australia and Tasmania, these schools are regularly inspected. In Victoria and Tasmania, schools and teachers must be registered. Non-government schools in Queensland and also those in Western Australia are inspected on request.

The principals of a number of the larger non-government schools have formed organisations with both State and Australia-wide coverage, namely the Headmasters Conference of the Independent Schools of Australia and the Association of Heads of Independent Girls Schools of Australia. The National Council of Independent Schools represents all independent schools and aims to promote their interests.

Most Roman Catholic parish schools charge fees, but payment is not insisted on in the case of families who cannot afford it. At the majority of non-government secondary schools, privately endowed scholarships are available, and reductions in fees are normally made for children of clergy or for two or more members of one family attending the same school. With these exceptions, pupils of non-government schools must pay fees.

Certain State scholarships and bursaries are tenable at approved non-government secondary schools. From the establishment of school systems by the State governments, official policy has been largely against the provision of direct financial assistance to non-government schools, but since 1967, all States have introduced some system of direct assistance to non-government schools, usually in the form of pupil allowances. Most States also assist non-government schools in approved building projects. For details of Commonwealth finance for the building and equipping of science laboratories and school libraries, *see* pages 665-6 and 660.

### Schools and courses

A diagram of State and Territory school systems, showing current grades, examinations, and age levels is shown on Plate 35 page 635.

*Primary education.* Though school attendance is not compulsory until the age of six, many children begin school before that age, attending infants schools or infants classes attached to a primary school. In some States the first year in the infants department is known as 'kindergarten'. The emphasis in infants classes is on the development of skills in language and numbers.

Primary schools are normally provided when and where there is sufficient population to justify them. Irrespective of the size or the location of the school, standards of tuition are similar because teachers within a State follow similar courses of training and transfer between metropolitan and country areas. The education departments prescribe syllabuses of instruction, which are drawn up with the assistance of expert committees.

Progression from primary to secondary school is usually automatic. Allocation to particular schools or particular courses is based on the district in which the child lives, the recommendations of the headmaster, general ability tests, tests of achievement in the basic subjects, and parents' wishes.



*Secondary education.* The age of transfer from a government primary to secondary school is usually between twelve and thirteen. The secondary pupil takes up new studies, such as foreign languages, technical or commercial subjects, and moves on to more specialised studies in natural and social sciences and mathematics. The actual subjects studied depend on the ability of the pupil and, in some States, the type of school.

The most common type of secondary school is the comprehensive or multi-purpose high school, which offers a wide range of subjects. To cater for this diversity of subjects, most high schools now have modern facilities for the teaching of domestic science, commercial subjects, woodwork, and other technical subjects. In some States there are still, however, separate high schools specialising in technical, agricultural, commercial, or home science subjects. Some of the agricultural high schools are residential. The curriculum consists of general educational subjects and practical farm training. There are also 'area' and 'rural' schools offering up to three years of secondary study.

### Examinations

For information on examination procedures up to 1969, see Year Book No. 55, pages 485 and 486. Changes taking place from 1969 are set out below.

*Victoria.* In 1970, the Victorian matriculation examination was renamed, the Victorian Higher School Certificate Examination.

*Queensland.* The last Junior Examination was held in 1970 and a Certificate based on school assessment is to be issued from 1971. The last Senior Examination will be held not later than 1972 and certificates based on school assessment will be issued as from the following year.

*Western Australia.* Since 1970, all first year high school pupils in government schools and many in non-government schools study under the Achievement Certificate System which replaced the Junior Certificate examination. Pupils are required to take four 'core' subjects (English, mathematics, social studies, and science) and to study one or more of a wide range of subjects, including languages, art, trade subjects, music, and drama. An Achievement Certificate is awarded when the pupil leaves school, assessment being based on a cumulative record of achievements maintained at the school.

*Tasmania.* The Schools Board Certificate examination at the end of fourth year was discontinued in 1969, and replaced by an internal School Certificate examination. The matriculation examination has been renamed the Higher School Certificate.

### Special facilities for pupils

Details of medical and dental inspection of school children, and the provision of free milk are given in Chapter 14, Public Health. In Year Book No. 55, a general description is given of provisions for isolated areas, schools of the air and correspondence schools (pages 494 and 495), handicapped children and physical education (page 495), and educational guidance and school broadcasting and television (page 496). The following particulars supplement that information.

*Aboriginal education.* Aboriginal children in towns and cities attend the same schools as other Australian children, but special schools for Aborigines have been developed on isolated settlements and mission stations, financed partly or wholly from government sources. A special Commonwealth Committee has been set up to advise on the educational and related needs of Aboriginal children enrolled in community schools in the Northern Territory. Education is one of the areas of Aboriginal affairs which has received considerable stimulation from Commonwealth assistance, financial and otherwise, following the 1967 Referendum and *Constitution Alteration (Aboriginals)* 1967.

*School broadcasting.* Both radio and television school broadcasts continue to be used extensively by schools. They are produced by the Australian Broadcasting Commission and, as a result of the increasing number of transmitting stations, are now available to almost all schools in the Commonwealth. Approximately 91 per cent of schools make some use of the radio programmes and about 66 per cent, of television. During the year almost 3,000 radio programmes and about 300 television programmes were produced and, in addition, over 200 television programmes, relevant to Australian needs, were purchased overseas. The increasing use of audio and videotape recorders by schools, especially in secondary departments, give a flexibility of usage that has greatly increased the utilisation of programmes. There are about 10 hours of radio and 25 hours of television available each week in each State.

*Handicapped children.* The Commonwealth Department of Social Services, in conjunction with the Commonwealth Departments of Health and of Education and Science, commenced a survey of handicapped children in 1970. Payments under the *States Grants (Independent Schools) Act* 1969, which provides assistance to eligible independent schools, including special independent schools for handicapped children, commenced in 1970.

### **Scholarships and bursaries**

All States have schemes of financial assistance to school pupils, mostly at the secondary level, through scholarships or bursaries. As tuition in government schools is free, this assistance is usually in the form of maintenance allowances, both for children living with their parents and for those living away from home. These may be paid in a lump sum or in instalments throughout the year. Awards are usually made on the results of a competitive examination, and sometimes a means test is applied. Other government and private authorities, such as the Repatriation Department and the Legacy War Orphans Fund, assist certain categories of pupils with their school education. Many non-government schools also award scholarships, on a competitive basis, which enable pupils to attend the particular schools at reduced fees or without payment of fees.

In 1964 the Commonwealth Government, with the co-operation of the State education departments, introduced a programme of secondary scholarships to encourage successful candidates to complete the final two years of secondary schooling. Further details of the Commonwealth secondary scholarships scheme and the Commonwealth technical scholarship scheme are given on page 656.

Various forms of financial assistance, both government and non-government are available to help Aborigines to undertake further studies. In 1970, 100 secondary scholarships were awarded by Abschol, a scholarship scheme organised by the Australian Union of Students, for Aborigines; 608 primary and secondary scholarships were provided by the Aboriginal Education Incentive Scholarship Fund in Victoria; and 62 secondary scholarships were provided by the Aboriginal Education Council in New South Wales. *See* page 657 for details of the Aboriginal Study Grants Scheme, begun in 1968 by the Commonwealth.

### **Subsidised transport to and from school**

All the States have systems of subsidies by which transport is free or at a concession rate for children who have to travel to and from school daily. In some States an allowance is paid if private transport has to be used.

### **Subsidies to children living away from home**

For children whose homes are too far away from a secondary school to allow daily travel, some States run hostels or give financial assistance to privately owned hostels. The States also pay boarding allowances to the holders of State bursaries or scholarships and, in some cases, agricultural scholarships include free board at an agricultural high school.

### **School buildings**

The increase in the school population in the last decade led to an expansion in school building. To cope with this growth in population, it has been necessary to make use of temporary and emergency structures. Quite large schools are being built in stages to match increases in local population in new and rapidly developing suburbs in metropolitan areas. For details of assistance provided by the Commonwealth for the building and equipping of science laboratories, *see* page 660.

### **Textbooks, materials and other equipment**

The State education departments supply government schools, free of charge, with essential equipment, including scientific apparatus, maps, blackboards, chalk, and cleaning materials, and non-consumable equipment for commercial, home science and manual training. Garden tools and physical training equipment are also supplied in most States. Readers and writing equipment for individual pupils are sometimes supplied free in primary schools, and several education departments produce monthly school magazines which are supplied free or at a nominal price. In primary schools (except in one State where textbooks are made available free to children in both government and non-government primary schools) and in secondary schools, textbooks must, however, be purchased by pupils. In several States, schools own stocks of textbooks which are hired to pupils, and in one State, secondary textbooks are sold at reduced prices. In four States certain textbook costs are subsidised for pupils attending government and non-government schools. The parent and citizen organisations, with the assistance of subsidies from the education departments, are usually responsible for providing equipment such as radios and television sets, film strip projectors, pianos, duplicators and, in particular, library books.

### **Visual aids**

Each of the State education departments has a visual education branch to handle the production and distribution of such materials. Film strips and posters are distributed free or at low costs. Films are held in central libraries and are requisitioned by schools as required for teaching purposes. Commonwealth financial assistance under the Secondary Schools Libraries Programme is available to State education departments for a range of audio-visual equipment.

### Parent and citizen organisations

In Australia, where all government schools are administered by central departments, there is limited opportunity for local participation in education. Public interest is expressed through parents committees or organisations of parents and other citizens interested in supporting their local school. The Education Acts of all States provide for the formation of groups of this type, whose aims are to promote an interest in the school by bringing parents and teaching staff together, to help provide supplementary teaching aids and recreation materials, to foster the regular attendance of children at school, and to help find accommodation for teachers. In several States the general maintenance of school buildings, equipment and grounds is a statutory responsibility of the parent groups, costs being covered by government grants. Lunch canteen services at local schools are maintained by groups in some States. Parent groups have established school children's insurance schemes, operated through State Government insurance offices or private insurance companies. These schemes cover accidents to children which occur between the time of leaving home for school and returning home by the usual direct route.

State-wide councils or federations of parent groups are associated in a federal body, the Australian Council of School Organisations.

### Research

All State education departments have branches undertaking research directed towards departmental activities. The work of the research branches is concerned with such matters as curriculum content, new teaching methods, evaluation procedures, wastage rates, and education statistics. Education research is also carried out by the faculties and departments of education in the universities, the Commonwealth Department of Education and Science and the Australian Council for Educational Research. Information on current research projects is summarised below:

*The 1961 Study.* Recently the Department of Education and Science in co-operation with the Australian Vice-Chancellors Committee completed a longitudinal study of the progress of Australian bachelor degree students who were new first degree entrants to Australian universities in 1961.

*Tertiary Education Entrance Project.* A set of aptitude tests for improving methods of selection of students for tertiary studies is being developed by the Australian Council for Educational Research, supported by the Commonwealth through the Department of Education and Science.

### Curriculum development

While State education departments are responsible for the development of the curricula followed in their schools, the Commonwealth is prepared to consider support for proposals in the field of curriculum development if they are put forward by more than one State. Two such proposals are at present receiving Commonwealth financial support. They are:

*Australian Science Education Project.* This project, which developed out of the Junior Secondary Science Project initiated by the Victorian, South Australian and Tasmanian Governments has been extended to all States. The Commonwealth will contribute \$750,000 and the States \$450,000 over the five-year period commencing in 1969.

*National Committee on Social Sciences Teaching.* This Committee was established in 1970 as a joint project between the Commonwealth and the States to examine goals and suggested desirable content for inclusion in the new social science curricula to suit Australian conditions. The Chairman of the Committee is Professor W. F. Connell, Professor of Education of the University of Sydney.

*Asian Studies.* The findings of the Advisory Committee on the teaching of Asian Languages and Cultures, a Committee set up by the Commonwealth in 1969, were made public in March 1971 by the tabling of the Committee's report in Parliament.

## Numbers of schools, teachers and pupils

The statistics which follow relate generally to schools providing education according to the primary or secondary school curricula of the various State education departments, or both, whether provided in government or non-government schools. Junior technical schools, correspondence schools, and schools in institutional homes, hospitals and similar establishments are included. Institutions providing only pre-school education, senior technical and agricultural colleges, evening schools, continuation classes, and institutions such as business colleges and coaching establishments are, as a rule, excluded.



School censuses are conducted annually at or about the beginning of August throughout all States and Territories of Australia. The numbers of pupils in the tables which follow refer to enrolments at the school census date. The numbers of schools and teachers refer to the position at dates which vary from State to State and in some instances from year to year. While it has not been possible to present all figures on a uniform basis between States, continuity of the figures for any one State over the period of years shown has been maintained as far as possible.

### Schools, teachers and pupils

The numbers of government and non-government schools, teachers and pupils in 1970 and earlier years are shown in the following tables. For more detailed statistics, see *Schools* bulletin (reference No. 13.5).

#### NUMBERS OF SCHOOLS, TEACHERS AND PUPILS, BY CATEGORY OF SCHOOL STATES AND TERRITORIES, 1970

	Government schools	Non-government schools						Total	All schools
		Denominational							
		Church of England	Methodist (a)	Presbyterian (a)	Roman Catholic	Other	Undenominational		
SCHOOLS									
New South Wales	2,415	34	6	12	628	25	85	790	3,205
Victoria	2,215	35	4	11	487	28	16	581	2,796
Queensland	1,236	14	..	4	294	18	12	342	1,578
South Australia	651	10	4	2	124	23	7	170	821
Western Australia	589	8	3	2	168	10	5	196	785
Tasmania	238	4	1	2	50	7	1	65	303
Northern Territory	79	..	1	..	11	1	1	14	93
Australian Capital Territory	47	3	..	..	19	..	..	22	69
Australia—1970	7,470	108	19	33	1,781	112	127	2,180	9,650
1969	7,549	110	18	34	1,784	107	121	2,174	9,723
1968	7,636	113	20	38	1,807	109	96	2,183	9,819
1967	7,698	113	20	38	1,818	105	92	2,186	9,884
1966	7,770	114	20	39	1,820	100	100	2,193	9,963
TEACHERS(b)									
New South Wales	34,595	953	193	387	6,520	138	587	8,778	43,373
Victoria	27,335	1,126	263	545	4,775	458	266	7,433	34,768
Queensland	12,250	320	..	51	2,539	204	235	3,349	15,599
South Australia	9,600	253	121	88	915	119	108	1,604	11,204
Western Australia	6,949	273	120	98	1,096	50	12	1,649	8,598
Tasmania	3,609	124	25	45	386	80	6	666	4,275
Northern Territory	680	..	19	..	70	8	1	(c)98	778
Australian Capital Territory	1,067	103	..	..	276	..	..	379	1,446
Australia—1970	96,085	3,152	741	1,214	16,577	1,057	1,215	23,956	120,041
1969	91,888	3,006	711	1,165	15,413	989	1,139	22,423	114,311
1968	87,559	2,942	693	1,171	15,002	964	1,063	21,835	109,394
1967	82,481	2,817	682	1,140	14,118	887	1,049	20,693	103,174
1966	78,194	2,727	659	1,111	13,395	855	1,055	19,802	97,996
PUPILS (SCHOOL CENSUS)									
New South Wales	760,092	14,288	3,095	5,790	189,340	2,233	6,787	221,533	981,625
Victoria	585,440	17,039	4,243	8,317	150,602	7,029	3,798	191,028	776,468
Queensland	295,543	5,575	..	984	74,768	3,996	4,533	89,856	385,399
South Australia	228,788	4,028	2,287	1,547	25,816	2,373	1,336	37,387	266,175
Western Australia	174,024	4,102	1,903	1,444	33,270	914	311	41,944	215,968
Tasmania(d)	77,447	1,757	315	582	10,316	1,261	168	14,399	91,846
Northern Territory	13,790	..	423	..	2,082	201	22	2,728	16,518
Australian Capital Territory	25,053	1,526	..	..	7,655	..	..	9,181	34,234
Australia—1970	2,160,177	48,315	12,266	18,664	493,849	18,007	16,955	608,056	2,768,233
1969	2,113,975	47,376	12,086	18,623	491,207	17,164	16,530	602,986	2,716,961
1968	2,054,808	46,741	12,055	18,634	490,818	16,704	15,951	600,903	2,655,711
1967	1,990,940	45,944	11,764	18,487	486,738	15,925	15,823	594,681	2,585,621
1966	1,918,816	44,210	11,405	17,954	478,422	15,347	15,644	582,982	2,501,798

(a) Excludes schools conducted in Queensland by the Presbyterian and Methodist Schools Association. These are included in 'Other denominational'. (b) Excludes teachers-in-training generally. Figures are full-time teachers plus part-time teachers expressed in equivalent full-time units. For basis of calculating equivalent full-time units, see footnote (b) to next table. (c) Excludes unqualified teachers and teaching assistants at mission schools. (d) Includes pupils in pre-school grades at normal schools, but excludes pupils at pre-schools not attached to ordinary schools.



## NUMBERS OF TEACHERS: STATES AND TERRITORIES, 1970(a)

	Government schools			Non-government schools			All schools		
	Part-time		Equiv. f.t.u. (b)	Part-time		Equiv. f.t.u. (b)	Part-time		Equiv. f.t.u. (b)
	Full-time	No.		Full-time	No.		Full-time	No.	
New South Wales	33,468	2,285	1,127	8,135	(c)2,153	643	41,603	4,438	1,770
Victoria	25,694	(d)3,226	(d)1,641	6,910	1,806	523	32,604	5,032	2,164
Queensland	12,250	1	..	3,167	720	182	15,417	721	182
South Australia	9,318	614	282	1,418	529	186	10,736	1,143	468
Western Australia	6,787	345	162	1,520	439	129	8,307	784	291
Tasmania	3,521	280	88	593	204	73	4,114	484	161
Northern Territory	671	15	9	(e)97	(e)5	(e)1	768	20	10
Australian Capital Territory	1,016	85	51	(c)347	107	32	1,363	192	83
Australia—1970	92,725	6,851	3,360	22,187	5,963	1,769	114,912	12,814	5,129
1969	89,086	5,867	2,802	20,956	5,000	1,467	110,042	10,867	4,269
1968	84,922	5,579	2,637	20,467	5,052	1,368	105,389	10,631	4,005
1967	80,199	5,203	2,282	19,468	4,828	1,225	99,667	10,031	3,507
1966	75,977	4,921	2,217	18,656	4,422	1,146	94,633	9,343	3,363

(a) Excludes teachers-in-training generally. (b) The methods used for calculating equivalent full-time units of part-time teaching vary from State to State, between government and non-government schools, and between primary and secondary schools within States. For most schools the information is based on either the total hours worked or total number of class periods taken in a week by part-time teachers, in relation to the normal hours worked or periods taken by full-time teachers. (c) Visiting teachers who attend more than one school are counted as part-time in each school. (d) If a full-time teacher teaches both senior and junior technical school pupils, he is counted as part-time in these statistics (which include junior technical, but not senior technical schools), if his teaching load in the junior school is less than 75 per cent. (e) Excludes unqualified teachers and teaching assistants at mission schools.

## GOVERNMENT AND NON-GOVERNMENT SCHOOLS: PUPILS, BY SEX, STATES AND TERRITORIES, 1970

(School census enrolment)

	Government schools			Non-government schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
New South Wales	396,867	363,225	760,092	111,716	109,817	221,533	508,583	473,042	981,625
Victoria	308,199	277,241	585,440	93,451	97,577	191,028	401,650	374,818	776,468
Queensland	154,326	141,217	295,543	45,176	44,680	89,856	199,502	185,897	385,399
South Australia	119,505	109,283	228,788	18,546	18,841	37,387	138,051	128,124	266,175
Western Australia	91,698	82,326	174,024	19,959	21,985	41,944	111,657	104,311	215,968
Tasmania	40,321	37,126	77,447	6,918	7,481	14,399	47,239	44,607	91,846
Northern Territory	7,080	6,710	13,790	1,356	1,372	2,728	8,436	8,082	16,518
Australian Capital Territory	12,929	12,124	25,053	4,813	4,368	9,181	17,742	16,492	34,234
Australia—1970	1,130,925	1,029,252	2,160,177	301,935	306,121	608,056	1,432,860	1,335,373	2,768,233
1969	1,107,089	1,006,886	2,113,975	299,095	303,891	602,986	1,406,184	1,310,777	2,716,961
1968	1,077,012	977,796	2,054,808	297,433	303,470	600,903	1,374,445	1,281,266	2,655,711
1967	1,044,464	946,476	1,990,940	294,045	300,636	594,681	1,338,509	1,247,112	2,585,621
1966	1,006,742	912,074	1,918,816	287,647	295,335	582,982	1,294,389	1,207,409	2,501,798

## GOVERNMENT AND NON-GOVERNMENT SCHOOLS: PUPILS, BY AGE AND SEX AUSTRALIA, 1970

(School census enrolment)

Age last birthday (years)	Government schools			Non-government schools			Total		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Under 6	80,049	75,578	155,627	20,148	20,278	40,426	100,197	95,856	196,053
6	101,056	94,216	195,272	24,708	24,588	49,296	125,764	118,804	244,568
7	103,049	96,514	199,563	25,334	25,761	51,095	128,383	122,275	250,658
8	104,136	97,483	201,619	25,912	26,183	52,095	130,048	123,666	253,714
9	103,915	96,881	200,796	25,808	26,455	52,263	129,723	123,336	253,059
10	101,200	94,407	195,607	25,733	26,436	52,169	126,933	120,843	247,776
11	99,650	93,314	192,964	26,060	26,463	52,523	125,710	119,777	245,487
12	96,622	89,584	186,206	26,214	27,588	53,802	122,836	117,172	240,008
13	94,479	86,842	181,321	24,903	27,046	51,949	119,382	113,888	233,270
14	92,917	83,496	176,413	24,121	26,052	50,173	117,038	109,548	226,586
15	72,868	63,379	136,247	21,736	23,054	44,790	94,604	86,433	181,037
16	46,343	36,108	82,451	16,031	15,507	31,538	62,374	51,615	113,989
17	25,129	17,105	42,234	11,246	8,895	20,141	36,375	26,000	62,375
18 and over	9,512	4,345	13,857	3,981	1,815	5,796	13,493	6,160	19,653
Total	1,130,925	1,029,252	2,160,177	301,935	306,121	608,056	1,432,860	1,335,373	2,768,233

## SCHOOLS: PUPILS, BY AGE, STATES AND TERRITORIES, 1970

(School census enrolment)

Age last birthday (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Under 6	77,038	61,113	19,186	19,480	8,426	5,698	2,080	3,032	196,053
6	85,077	67,578	36,041	22,654	20,189	8,068	1,831	3,130	244,568
7	87,806	68,569	36,710	23,179	21,198	8,319	1,800	3,077	250,658
8	89,341	68,983	37,433	23,609	20,939	8,660	1,606	3,143	253,714
9	88,335	68,627	37,342	24,075	21,287	8,718	1,638	3,037	253,059
10	86,098	67,228	36,820	23,924	20,722	8,553	1,499	2,932	247,776
11	85,621	67,301	35,987	23,549	20,269	8,492	1,370	2,898	245,487
12	84,574	64,605	35,456	22,863	20,239	8,211	1,291	2,769	240,008
13	80,970	63,998	34,450	22,881	19,594	7,791	1,091	2,495	233,270
14	78,163	62,573	33,046	22,381	19,128	7,868	992	2,435	226,586
15	63,783	52,574	23,551	18,314	13,650	6,324	710	2,131	181,037
16	40,660	37,288	11,918	12,294	6,621	3,221	423	1,564	113,989
17	24,933	19,957	5,917	5,422	3,356	1,511	148	1,131	62,375
18 and over	9,226	6,074	1,542	1,550	350	412	39	460	19,653
Total	981,625	776,468	385,399	266,175	215,968	91,846	16,518	34,234	2,768,233

## Grades of pupils

The classification of pupils as primary and secondary and the allocation of primary and secondary pupils to grades differs from State to State because of differences in the curricula and the organisation of schools and grades. Current figures of pupils in grades are shown in the *Schools* bulletin (reference No. 13.5) and the annual reports of the State Ministers of Education. *See also* Plate 35 page 635.

## Pre-school education

Pre-school centres were first established in the Australian mainland states by voluntary organisations and a large number are still supported and supervised by them. The organisations include kindergarten unions, day nursery and creche associations, pre-school associations and denominational kindergartens. All now receive financial assistance from State governments but the amounts granted vary considerably from State to State. Other pre-schools are subsidised directly by States. In Tasmania pre-school teachers are employed by the State Education Department and in the internal Territories by the Commonwealth Department of Education and Science; buildings are also provided in the Territories. In all cases parents assist in the provision of equipment.

Pre-school centres are situated in city and country areas and programmes are adapted to meet the needs of the children attending. A typical pre-school centre provides half-day sessions for two groups of children. Active parent participation in the running of the centres is encouraged. A limited number of creches and day nurseries provide full-day care in closely settled areas, and there is an increasing demand for care for children of working mothers, met in part by privately run centres of varying standards. In a few cities occasional care is available and there are a few residential centres.

The Australian Pre-School Association is a national body comprising all the voluntary organisations who have as their main concern the welfare and education of children of pre-school age. It co-ordinates and strengthens pre-school work, sets standards, and is responsible for the administration and supervision of the six Lady Gowrie Centres established by the Commonwealth for child-study, research, and demonstration.

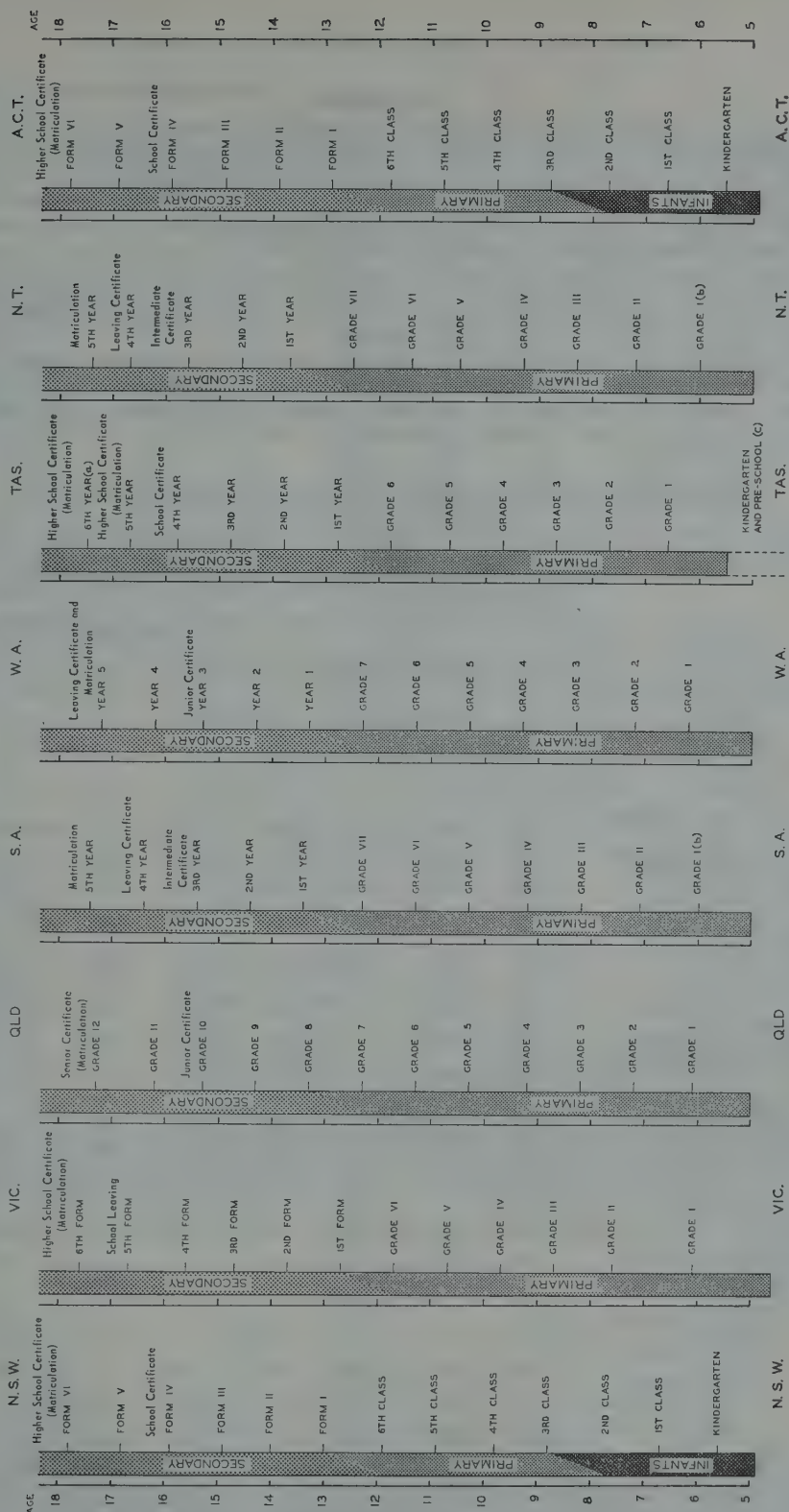
Radio and television bring some experience of pre-school education within the reach of practically every pre-school child in Australia. The Australian Broadcasting Commission pioneered the programme 'Kindergarten of the Air', a twenty-five minute session, broadcast throughout the country from Monday to Friday. This session is designed to reach children in isolated areas. The half-hour television programme 'Play-School' is also available each week-day to children of kindergarten age in State capital cities and some country areas.

## Post-school study courses

As part of the quarterly population survey (*see* Chapter 21, Employment and Unemployment) a survey was conducted in all States and Territories in August 1968 to obtain estimates of persons enrolled for courses of study or training outside school. The results of the survey supplement data about enrolments collected from schools and other institutions, and present a general indication of post-school education. For details of the survey *see* Year Book No. 56, pages 640-44.

# GRADES AND EXAMINATIONS IN THE PRIMARY AND SECONDARY SCHOOL SYSTEMS IN EACH STATE AND TERRITORY, 1970

The grade terminology follows, as nearly as possible, that used in government primary and high schools in each State in 1970. It is not necessarily used in all types of schools. The grades have been written in to agree with the age-scale shown on the diagram, in order to indicate differences in age-grade patterns between States. However, age-grade information is not precise enough to allow determination of accurate average age of pupils in each grade, and the age indications are therefore only approximate. The diagram should not be taken as a comparison of academic standards of grades between States. The columns of the diagram have been classed with a line where pupils are not accepted into government schools below the age shown. For a more detailed presentation of the systems operating in each State, reference should be made to diagrams etc. appearing in the annual reports of State Education Departments.



(a) In Tasmania many pupils study for the Higher School Certificate over a two year period.  
 (b) Preparatory grades are attached to some schools in South Australia and the Northern Territory.  
 (c) In Tasmania, many children attend two years pre-school, one year kindergarten grade, or one year of both, before entering grade 1.



## Universities

Applicants for enrolment in Australian universities are required to have passed the matriculation examination in one of the States after five or six years of secondary education. Each university has its own regulations for matriculation, specifying the number and combination of subjects to be passed or the level of performance required. Students entering the universities have the choice of undergraduate study in various faculties. All universities also provide post-graduate courses of study.

There are fifteen universities in Australia. The James Cook University of North Queensland, which was formerly the University College of Townsville, was raised to the status of a full university in 1970. Details of the courses offered by these institutions, together with background information on their teaching and research programmes, and a summary of general university development in recent years, is given in Year Book No. 55, pages 507-9.

The following tables show statistics of university staff, student enrolments, assisted students, degrees conferred, diplomas and certificates granted, income and expenditure. The first table gives summary statistics for each university and branch whereas the other tables provide State figures only. Reference should also be made to the annual publications *University Statistics, Parts I-III* for further details.

UNIVERSITIES: SUMMARY STUDENT AND STAFF STATISTICS FOR EACH UNIVERSITY AND BRANCH, 1970

	Students enrolled(a) for			All students	Teaching and research staff(b)		Other staff	
	Higher degree courses	Bachelor degree courses	Non-degree courses		Full-time	Part-time(c)	Full-time	Part-time(d)
New South Wales—								
University of Sydney . . . . .	2,393	13,059	1,119	16,571	996	1,283	2,161	44
University of New South Wales—								
Kensington . . . . .	1,882	11,859	1,396	15,137	871	897	1,683	84
Wollongong University College . . . . .	82	1,038	57	1,177	74	28	80	3
Broken Hill Division . . . . .	6	85	9	100	14	9	25	2
Duntroon . . . . .	..	195	..	195	42	4	2	..
Jervis Bay . . . . .	..	20	..	20	(e)	(e)	(e)	(e)
Total, University of New South Wales . . . . .	1,970	13,197	1,462	16,629	1,001	938	1,790	89
University of New England . . . . .	265	4,546	566	5,377	336	78	692	47
University of Newcastle . . . . .	252	2,689	138	3,079	192	168	210	8
Macquarie University . . . . .	413	3,696	120	4,229	281	201	432	12
Total, New South Wales . . . . .	5,293	37,187	3,405	45,885	2,806	2,668	5,285	200
Victoria—								
University of Melbourne . . . . .	1,650	11,576	1,500	14,726	923	1,097	1,765	35
Monash University . . . . .	985	8,575	824	10,384	727	390	1,477	190
La Trobe University . . . . .	184	2,154	181	2,519	228	109	414	91
Total, Victoria . . . . .	2,819	22,305	2,505	27,629	1,878	1,596	3,656	316
Queensland—								
University of Queensland . . . . .	956	14,607	810	16,373	909	809	1,766	34
James Cook University of North Queensland . . . . .	93	1,104	14	1,211	114	76	194	6
Total, Queensland . . . . .	1,049	15,711	824	17,584	1,023	885	1,960	40
South Australia—								
University of Adelaide . . . . .	828	6,813	627	8,268	542	745	1,117	165
Flinders University . . . . .	130	1,647	131	1,908	153	101	311	57
Total, South Australia . . . . .	958	8,460	758	10,176	695	846	1,428	222
Western Australia—								
University of Western Australia . . . . .	565	6,609	608	7,782	455	570	942	99
Tasmania—								
University of Tasmania . . . . .	154	2,573	392	3,119	203	213	364	44
Australian Capital Territory—								
Australian National University—								
Institute of Advanced Studies . . . . .	533	..	4	537	..	..	1,229	..
School of General Studies . . . . .	172	3,682	227	4,081	307	56	355	..
Total, Australian Capital Territory . . . . .	705	3,682	(f)216	(f)4,603	(g)311	(g)85	(h)2,403	(h)29
Total, All Universities . . . . .	11,543	96,527	8,708	116,778	7,371	6,863	16,038	949

(a) Figures shown refer to net enrolments, i.e. gross enrolments adjusted for students enrolled for more than one course. If a student is enrolled for two or more courses at different levels, the adjustment is made against the lesser course. (b) Includes all staff with teaching functions but excludes research only staff. (c) Expressed as units of 100 teaching hours per annum. (d) Equivalent full-time units. (e) No university staff are at present attached to the R.A.N. College, Jervis Bay. (f) Adjusted for students enrolled at both the Institute and the School. (g) Includes 4 full-time and 29 part-time positions not allocated to either the Institute or the School. (h) Includes 819 full-time and 29 part-time positions not allocated to either the Institute or the School.



## University teaching and research staff

## UNIVERSITIES: TEACHING AND RESEARCH STAFF(a), 1970

<i>Full-time teaching and research staff</i>								
	<i>Professors</i>	<i>Associate professors and readers</i>	<i>Senior lecturers and lecturers</i>	<i>Assistant lecturers, demonstrators, etc.(b)</i>	<i>Total</i>	<i>Part-time teaching staff(c)</i>	<i>Full-time research only staff</i>	<i>Part-time research only staff(d)</i>
New South Wales . . .	296	267	1,563	680	2,806	2,668	637	19
Victoria . . .	201	166	1,060	451	1,878	1,596	380	31
Queensland . . .	86	107	541	289	1,023	885	182	13
South Australia . . .	93	68	417	117	695	846	274	14
Western Australia . . .	54	50	260	91	455	570	143	3
Tasmania . . .	31	22	107	43	203	213	31	7
Australian Capital Territory . . .	38	35	184	54	311	85	976	..
Australia—1970 . . .	799	715	4,132	1,725	7,371	6,863	2,623	86
1969 . . .	777	638	4,011	1,593	7,019	6,425	2,435	89
1968 . . .	721	581	3,706	1,479	6,487	6,197	2,367	82
1967 . . .	663	547	3,497	1,337	6,044	5,378	2,233	78
1966 . . .	615	487	3,297	1,261	5,660	5,641	2,046	82

(a) Occupied positions. Teaching and research staff includes all staff with teaching functions, but excludes research only staff which is shown separately. (b) Includes tutors and teaching fellows. (c) Expressed in units of 100 teaching hours per annum. (d) In equivalent full-time units of 35 hours per week.

## University students enrolled

## UNIVERSITIES: STUDENTS ENROLLED(a), 1970

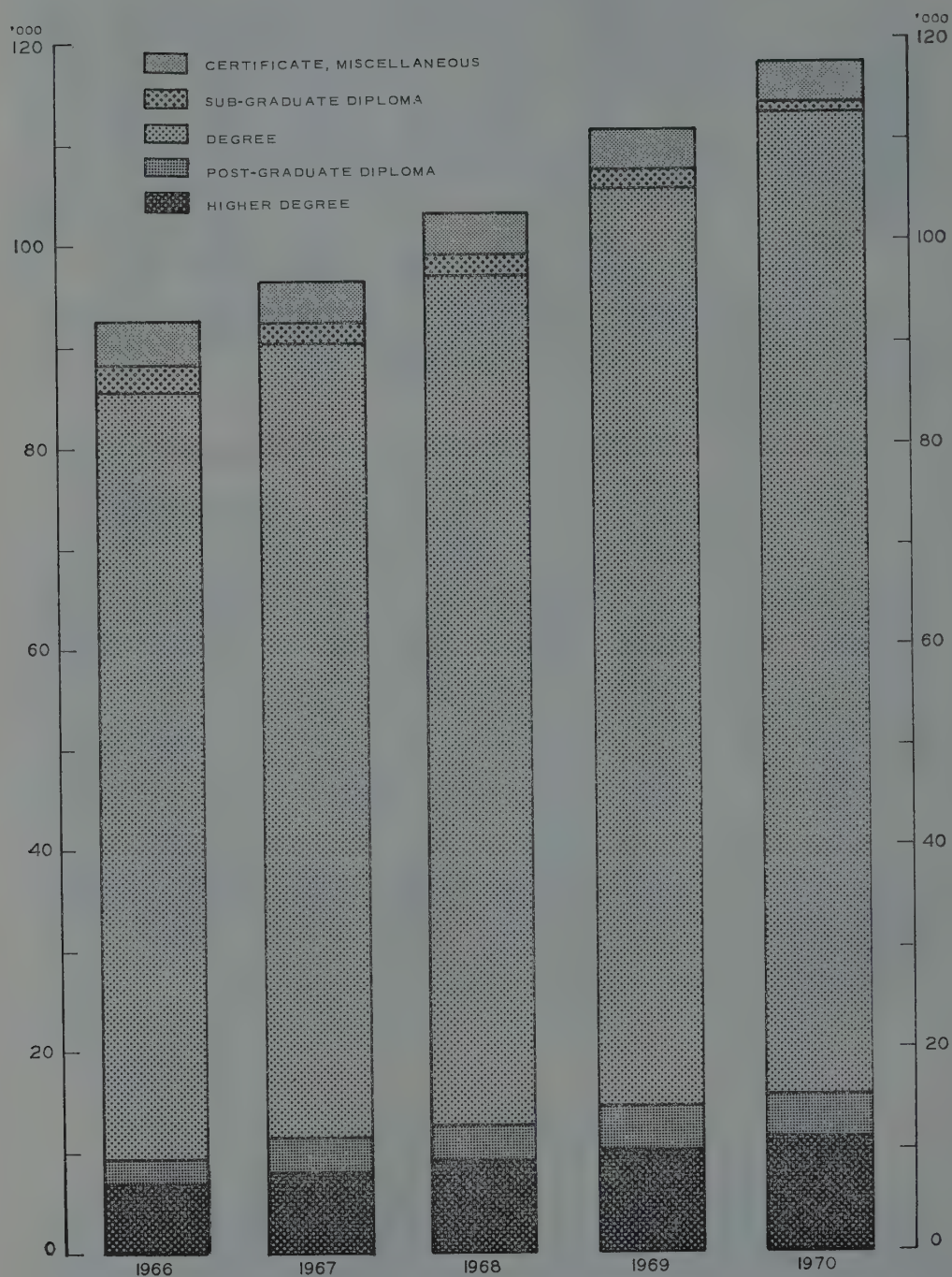
	<i>Degree courses</i>		<i>Diploma courses</i>		<i>Certificate courses</i>	<i>Other courses (b)</i>	<i>Adjusted total(c)</i>
	<i>Higher degree</i>	<i>Bachelor degree</i>	<i>Post-graduate</i>	<i>Sub-graduate</i>			
New South Wales . . .	5,297	37,286	1,910	46	301	1,270	45,885
Victoria . . .	2,821	22,995	1,010	663	..	983	27,629
Queensland . . .	1,049	15,711	309	101	37	377	17,584
South Australia . . .	958	8,490	402	165	10	227	10,176
Western Australia . . .	565	6,620	355	..	..	265	7,782
Tasmania . . .	154	2,573	173	15	31	178	3,119
Australian Capital Territory . . .	705	3,682	..	..	..	231	4,603
Australia 1970 . . .	11,549	97,357	4,159	990	379	3,531	116,778
1969 . . .	10,564	90,738	4,229	1,204	635	3,618	109,662
1968 . . .	9,230	84,317	3,596	1,625	459	3,662	101,537
1967 . . .	8,562	78,825	3,075	2,093	495	3,555	95,380
1966 . . .	6,995	76,453	2,472	2,625	267	3,556	91,291

(a) Figures shown refer to gross enrolments, i.e. students enrolled for two or more courses are included in each course for which they are enrolled. (b) Includes post-doctoral courses, master preliminary courses and students enrolled in one or more subjects of a normal course without having been admitted to the course as a whole. Prior to 1968 some enrolments for master preliminary were included in higher degree. (c) Adjusted for students enrolled for more than one course. Where course levels differ, the lesser course is adjusted.

Of the students enrolled in 1970, 81,847 were males and 34,931 were females.

# UNIVERSITY STUDENTS ENROLLED: COURSES

## AUSTRALIA, 1966 TO 1970



## University students commencing courses

**UNIVERSITIES: STUDENTS COMMENCING HIGHER DOCTOR, PH.D.  
MASTER AND BACHELOR DEGREE COURSES FOR THE FIRST TIME  
IN ANY AUSTRALIAN UNIVERSITY, 1970(a)**

	<i>Higher doctor degree courses</i>	<i>Ph.D. degree courses</i>	<i>Master degree courses</i>	<i>Bachelor degree courses</i>
New South Wales . . . .	8	292	1,217	10,610
Victoria(b) . . . .	..	107	295	6,048
Queensland . . . .	14	118	179	3,718
South Australia . . . .	5	87	143	2,045
Western Australia . . . .	..	81	90	1,982
Tasmania . . . .	..	17	13	802
Australian Capital Territory . .	..	154	53	1,100
<b>Australia—1970 . . . .</b>	<b>27</b>	<b>856</b>	<b>1,990</b>	<b>26,305</b>
1969 . . . .	26	849	1,974	25,518

(a) Figures shown refer to gross enrolments, i.e. students enrolled for two or more courses are included in each course for which they enrolled. (b) Figures for the University of Melbourne refer to students enrolling for the first time at that university.

Of students commencing courses in 1970, 19,438 were males and 9,740 were females.

## Full-time and other university students by level of course

**UNIVERSITIES: FULL-TIME AND OTHER STUDENTS ENROLLED BY LEVEL  
OF COURSE(a), 1970**

	<i>Higher degree courses</i>			<i>Bachelor degree courses</i>		<i>Other courses and enrolments(b)</i>		<i>All students</i>		
	<i>Full-time</i>	<i>Staff(c)</i>	<i>Other</i>	<i>Full-time</i>	<i>Other</i>	<i>Full-time</i>	<i>Other</i>	<i>Full-time</i>	<i>Other</i>	<i>Total</i>
New South Wales .	1,566	673	3,054	25,674	11,513	1,218	2,187	28,458	17,427	45,885
Victoria . . . .	1,410	535	874	17,669	4,636	1,019	1,486	20,098	7,531	27,629
Queensland . . .	339	284	426	7,674	8,037	300	524	8,313	9,271	17,584
South Australia .	538	135	285	6,201	2,259	297	461	7,036	3,140	10,176
Western Australia .	255	66	244	4,553	2,056	158	450	4,966	2,816	7,782
Tasmania . . . .	79	32	43	2,054	519	122	270	2,255	864	3,119
Australian Capital Territory . .	556	70	79	1,938	1,744	25	191	2,519	2,084	4,603
<b>Australia—1970 . .</b>	<b>4,743</b>	<b>1,795</b>	<b>5,005</b>	<b>65,763</b>	<b>30,764</b>	<b>3,139</b>	<b>5,569</b>	<b>73,645</b>	<b>43,133</b>	<b>116,778</b>
1969 . . . .	4,444	1,665	4,426	60,325	29,563	3,579	5,660	68,348	41,314	109,662
1968 . . . .	3,996	1,641	3,575	55,538	27,957	3,201	5,629	62,735	38,802	101,537
1967(d) . . . .	4,088	n.a.	4,474	51,841	26,984	3,347	5,887	58,325	37,055	95,380
1966(d) . . . .	3,354	n.a.	3,641	50,500	25,953	3,540	5,633	56,279	35,012	91,291

(a) Figures shown for 1968, 1969 and 1970 refer to net enrolments, i.e. gross enrolments adjusted for students enrolled for more than one course. If a student is enrolled for two or more courses at different levels, the adjustment is made against the lesser course.

(b) Includes post-graduate diploma, sub-graduate diploma, certificate and other non-degree course enrolments. (c) Full-time university staff enrolled in higher degree courses. (d) Figures shown are gross enrolments except in the 'all student' columns.

## Assistance to university students

The Commonwealth Government, through the Commonwealth Scholarships Board, grants undergraduate and post-graduate scholarships to university students. Details of the Commonwealth Scholarship Scheme are given on page 656. Commonwealth, State and local governments also award cadetships and other assistance to their employees. Foreign students are assisted by the Commonwealth Government under arrangements such as the Colombo Plan. The universities themselves grant exhibitions and scholarships as well as special assistance to teachers, etc.

## UNIVERSITIES: SOURCE OF STUDENT ASSISTANCE 1970

	Source of assistance					Type of course	
	Commonwealth Government	State Governments	Universities	Other	Adjusted total(a)	Higher degree	Other
New South Wales . . . . .	12,073	4,321	11,666	599	24,243	2,343	26,316
Victoria . . . . .	10,188	5,828	7,978	308	19,390	1,497	22,805
Queensland . . . . .	4,865	1,243	662	173	6,943	604	6,339
South Australia . . . . .	3,480	2,335	1,314	216	7,211	735	6,610
Western Australia . . . . .	2,361	3,009	226	133	5,718	370	5,359
Tasmania . . . . .	929	570	106	113	1,627	102	1,616
Australian Capital Territory . . . . .	1,112	392	688	62	2,110	597	1,657
<b>Australia—1970 . . . . .</b>	<b>35,008</b>	<b>17,698</b>	<b>22,640</b>	<b>1,604</b>	<b>67,242</b>	<b>6,248</b>	<b>70,702</b>
1969 . . . . .	32,425	16,134	22,400	1,983	63,110	6,269	66,673
1968 . . . . .	29,355	14,589	20,392	1,651	57,417	5,473	60,514
1967 . . . . .	27,320	15,499	16,204	1,813	48,728	5,145	55,691
1966 . . . . .	24,611	14,793	15,298	2,161	44,862	4,290	52,573

(a) Adjustment made for students assisted from more than one source. For 1968, 1969 and 1970, also adjusted for students who received assistance for a higher degree and another course.

## University degrees conferred, etc.

UNIVERSITIES: DEGREES CONFERRED, AND DIPLOMAS AND CERTIFICATES AWARDED  
YEAR ENDED 30 JUNE 1970(a)

	Degrees				Diplomas		
	Higher doctor	Ph.D.	Master	Bachelor	Post-graduate	Sub-graduate	Certificates
New South Wales . . . . .	11	193	470	4,590	1,259	17	329
Victoria . . . . .	26	141	240	3,701	530	123	..
Queensland . . . . .	6	57	68	1,918	177	58	159
South Australia . . . . .	6	59	31	1,593	161	127	..
Western Australia . . . . .	3	38	41	832	110	..	..
Tasmania . . . . .	..	13	14	427	87	3	62
Australian Capital Territory . . . . .	2	108	24	423	..	..	..
<b>Australia—1970 . . . . .</b>	<b>54</b>	<b>609</b>	<b>888</b>	<b>13,484</b>	<b>2,324</b>	<b>328</b>	<b>550</b>
1969 . . . . .	53	490	811	13,360	2,237	406	673
1968 . . . . .	31	(13)475	(11)740	(15)11,576	1,939	(9)557	(24)471
1967 . . . . .	40	327	635	10,393	1,454	445	570
1966 . . . . .	47	336	565	9,019	1,304	499	331

(a) Figures for the years 1966 and 1967 refer to the year ended 31 July; those for 1968 onwards refer to the year ended 30 June. Figures included in both 1967 and 1968 are shown in brackets against 1968 figures.



## University income and expenditure

## UNIVERSITIES: INCOME, 1969

(\$'000)

(\$ 000)

	<i>Government grants(a)</i>		<i>Other income</i>			
	<i>Cwlth Government grants</i>	<i>State Government grants</i>	<i>Donations and endowments(b)</i>	<i>Student fees(c)</i>	<i>Other income</i>	<i>Total income</i>
<b>TOTAL INCOME</b>						
New South Wales . . . . .	27,441	32,831	5,049	8,003	4,196	77,520
Victoria . . . . .	21,784	25,626	2,210	6,724	2,846	59,191
Queensland . . . . .	7,223	8,672	2,267	3,428	707	22,297
South Australia . . . . .	6,339	7,479	594	1,655	930	16,997
Western Australia . . . . .	3,924	5,872	936	1,658	885	13,276
Tasmania . . . . .	2,540	2,805	104	686	220	6,353
Australian Capital Territory . . . . .	24,636	..	623	671	1,576	27,506
<b>Australia—1969 . . . . .</b>	<b>93,887</b>	<b>83,285</b>	<b>11,784</b>	<b>22,825</b>	<b>11,359</b>	<b>223,140</b>
1968 . . . . .	88,788	72,848	11,984	20,919	9,749	204,289
1967 . . . . .	79,872	64,304	10,461	19,145	8,597	182,379
1966 . . . . .	71,012	65,509	10,781	16,653	7,053	171,008
1965 . . . . .	64,537	56,993	9,885	14,869	5,895	152,178

(a) Includes funds expended by various government departments and other bodies in respect of universities but not controlled by the universities. (b) In the case of endowments, only income from property and other investment of these endowments is included. The treatment of donations depends on the terms of the gift, etc. When the capital sum is specified to be expended over several years, only the portion of the capital sum allocated to each year is shown as income in that year, but if the capital sum is available for spending without limitation as to time, the full amount is recorded as income in the year it is received, irrespective of whether it is spent in that year or not. The capital value of land and buildings donated to the universities is not recorded as income, unless these properties are sold, in which case the amounts realised are included.

(c) Excludes fees collected on behalf of student unions, adult education fees, ad hoc course fees and public examination fees.

## UNIVERSITIES: EXPENDITURE, 1969

(\$'000)

	Teaching and research	Administration and general overhead	Libraries	Buildings, premises, grounds	Sundry auxiliary expenditure	Total expenditure
New South Wales . . . . .	42,479	6,758	3,402	16,620	4,238	73,496
Victoria . . . . .	29,456	4,539	2,945	15,498	3,050	55,488
Queensland . . . . .	14,516	1,631	1,151	3,943	839	22,080
South Australia . . . . .	11,710	1,295	1,059	2,910	768	17,743
Western Australia . . . . .	7,184	881	554	2,121	1,007	11,747
Tasmania . . . . .	3,327	452	335	1,913	201	6,228
Australian Capital Territory . . . . .	16,134	2,116	930	5,129	1,943	26,250
Australia—1969 . . . . .	124,806	17,672	10,375	48,134	12,046	213,034
1968 . . . . .	119,394	15,563	9,129	51,823	11,737	207,645
1967 . . . . .	106,386	13,298	7,915	48,061	9,056	184,714
1966 . . . . .	93,410	11,915	6,857	42,498	7,779	162,459
1965 . . . . .	83,256	10,159	5,830	43,976	6,526	149,747

## Colleges of advanced education

The Committee on the Future of Tertiary Education in Australia recommended that interim capital grants be made by both the States and the Commonwealth to twelve specified institutions in five States during 1965–66 preliminary to an arrangement for the expansion and development of tertiary education outside the universities. This recommendation was accepted by all governments, and the Commonwealth established the Commonwealth Advisory Committee on Advanced Education to advise it on the continued development of the colleges which provide training with a vocational emphasis, as distinct from the academic education provided by the universities.

In some States the colleges are being developed from existing technological institutions, but new colleges are also being established. Many colleges cater for a number of vocations in fields such as accountancy, architecture, art, applied chemistry, building, business management, data processing,

engineering, librarianship, medical laboratory technology, metallurgy, nutrition, pharmacy, and textile sciences. Provision has been made for teacher education to be conducted in a number of these multi-purpose colleges. Other colleges are specialist institutions, such as agricultural colleges, art schools, conservatoria of music, schools of physiotherapy and occupational therapy, and colleges offering courses in advanced nursing administration, domestic science, forestry and horticulture.

Administrative changes are taking place in the States to co-ordinate the activities of colleges of advanced education. In New South Wales, an Advanced Education Board has been established; in Victoria, the co-ordinating powers of the Victoria Institute of Colleges have been strengthened; in Tasmania, a Council of Advanced Education has been created; and in Queensland, a Board of Advanced Education has been established. In some States provision is also being made for co-ordination of all tertiary education; notably through the Higher Education Authority in New South Wales, the Tertiary Education Commission in Western Australia, and the Joint Consultative Council in Tasmania.

Further information about the development of colleges of advanced education can be found in the reports of the Commonwealth Advisory Committee on Advanced Education: the First Report, 1967-69, and the Second Report, 1970-72. Details of the maximum Commonwealth grants for the development of the colleges are given on page 654.

The following statistics refer to colleges of advanced education recognised as such under the States Grants (Advanced Education) Acts. Advanced level courses are courses, or parts of courses, approved for grants under the above Acts or for which approval has been, or will be, sought by the State concerned.

#### COLLEGES OF ADVANCED EDUCATION: ENROLMENTS IN ADVANCED LEVEL COURSES, STATES AND A.C.T., 1970

	Full-time			Other			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
New South Wales . . .	711	1,170	1,881	2,692	137	2,829	3,403	1,307	4,710
Victoria . . .	6,847	2,037	8,884	9,138	1,377	10,515	15,985	3,414	19,399
Queensland . . .	1,198	186	1,384	1,658	66	1,724	2,856	252	3,108
South Australia . . .	1,058	413	1,471	1,798	174	1,972	2,856	587	3,443
Western Australia . . .	1,402	422	1,824	2,766	424	3,190	4,168	846	5,014
Tasmania . . .	93	145	238	785	117	902	878	262	1,140
Australian Capital Territory . . .	149	79	228	611	141	752	760	220	980
Australia . . .	11,458	4,452	15,910	19,448	2,436	21,884	30,906	6,888	37,794

#### COLLEGES OF ADVANCED EDUCATION: TOTAL AND FIRST ENROLMENTS IN ADVANCED LEVEL COURSES, BY FIELD OF STUDY, AUSTRALIA, 1970

Field of study	Full-time			Other			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
TOTAL ENROLMENTS									
Agriculture . . .	858	46	904	43	2	45	901	48	949
Applied sciences . . .	1,535	259	1,794	2,550	297	2,847	4,085	556	4,641
Art and design . . .	864	1,027	1,891	646	510	1,156	1,510	1,537	3,047
Building, surveying, architecture, etc. . . .	800	78	878	1,580	51	1,631	2,380	129	2,509
Business studies . . .	2,252	534	2,786	8,445	588	9,033	10,697	1,122	11,819
Engineering and technology . . .	4,161	22	4,183	5,214	18	5,232	9,375	40	9,415
Liberal studies . . .	195	347	542	557	481	1,038	752	828	1,580
Music . . .	100	306	406	8	8	16	108	314	422
Para-medical . . .	562	1,530	2,092	405	481	886	967	2,011	2,978
Teacher education . . .	131	303	434	..	..	..	131	303	434
Total enrolments . . .	11,458	4,452	15,910	19,448	2,436	21,884	30,906	6,888	37,794
Number of students(a) . . .	11,446	4,445	15,891	19,403	2,433	21,836	30,849	6,878	37,727
FIRST ENROLMENTS									
Agriculture . . .	512	24	536	16	1	17	528	25	553
Applied sciences . . .	719	136	855	819	145	964	1,538	281	1,819
Art and design . . .	442	474	916	193	157	350	635	631	1,266
Building, surveying, architecture, etc. . . .	307	39	346	319	7	326	626	46	672
Business studies . . .	1,149	293	1,442	3,350	220	3,570	4,499	513	5,012
Engineering and technology . . .	1,488	12	1,500	1,243	13	1,256	2,731	25	2,756
Liberal studies . . .	135	228	363	281	263	544	416	491	907
Music . . .	34	121	155	3	6	9	37	127	164
Para-medical . . .	234	750	984	137	165	302	371	915	1,286
Teacher education . . .	67	175	242	..	..	..	67	175	242
Total first enrolments . . .	5,087	2,252	7,339	6,361	977	7,338	11,448	3,229	14,677

(a) Adjusted for students enrolled for more than one advanced level course.

**COLLEGES OF ADVANCED EDUCATION: TEACHING AND DIRECTLY SUPPORTING  
STAFF(a), STATES AND A.C.T., 1970**

	<i>Full-time staff</i>			<i>Part-time staff</i>			<i>Total (equivalent full-time units) (Col. 3 + Col. 6) (7)</i>
	<i>Number</i>	<i>Directly support- ing(c)</i>	<i>Advanced level work in equivalent full-time units(d)</i>	<i>Number</i>	<i>Directly support- ing</i>	<i>Advanced level work in equivalent full-time units(f)</i>	
<i>Teaching (b) (1)</i>			<i>Teaching (e) (4)</i>				
New South Wales	300	82	332	477	26	96	428
Victoria . . .	1,354	225	1,335	1,205	46	246	1,581
Queensland(g) .	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
South Australia .	261	98	302	188	4	31	333
Western Australia	267	101	368	147	50	38	406
Tasmania . . .	57	9	64	200	21	37	101
Australian Capital Territory . . .	43	4	47	54	..	12	59

(a) Directly supporting staff are those who work in laboratories, etc., and, whilst not teaching, form an integral part of the teaching services. (b) Includes the following numbers of teachers engaged in teaching both advanced level and other courses: New South Wales, 86; Victoria, 573; South Australia, 109; and Tasmania, 9. (c) Comprises directly supporting staff wholly engaged in assisting teaching of advanced level courses, and others engaged in assisting teaching of both advanced level and other courses. (d) The estimated portion of time (expressed in terms of equivalent full-time staff) devoted to advanced level courses by full-time teaching and directly supporting staff engaged in both advanced level and other work. (e) Includes the following numbers of teachers engaged in teaching both advanced level and other courses: New South Wales, 78; Victoria, 174; South Australia, 33; Tasmania, 2. (f) The component of advanced level course work (in terms of equivalent full-time staff) undertaken by all part-time teaching and directly supporting staff engaged during the year. (g) The numbers of staff in Queensland are 307 full-time and 444 part-time.

### Teacher education

State education departments recruit most prospective teachers for government service from students leaving schools after completion of secondary education. Each department offers training awards annually on the basis of academic merit and personal suitability. These awards cover the cost of a teacher training course (which may include university studies) and provide a living allowance. Students are usually required to enter into an agreement to serve for a specified number of years in the government schools of the State where they have trained. In some States intending teachers can obtain a scholarship at the first public secondary examination to enable them to complete teachers college entrance requirements.

The State education departments conduct teachers colleges to train teachers for government schools. These colleges are co-educational and, in the larger States, have been established in country areas as well as in cities. The principal and staff of the colleges are responsible to the Director-General of Education in the State concerned. Teacher education is now being conducted at Mitchell (Bathurst) and Canberra colleges of advanced education. Teachers colleges are also conducted by other organisations. For details of Commonwealth financial assistance to the States for building projects, see pages 662-3.

In 1970, there were 9 government teachers colleges in New South Wales, 13 in Victoria, 4 in Queensland, 5 in South Australia, 3 in Western Australia and 2 in Tasmania. Excluding kindergarten teachers colleges (see page 646) there were 5 private colleges in New South Wales, 5 in Victoria, 2 in Queensland, and 1 in the Australian Capital Territory. The Australian School of Pacific Administration in New South Wales also conducts teacher education courses.

#### Teachers for government schools

*Training of teachers.* Most teachers for government primary schools are trained in teachers colleges. Intending secondary school teachers either obtain a university degree with additional professional teaching training such as a Diploma in Education, a diploma or certificate from a teachers college or follow a secondary teaching course at a college of advanced education. Teachers of specialist subjects, such as music, art, manual arts, domestic science, and commercial subjects, receive from two to five years training which varies according to the institution concerned and the type of school in which the teacher is to serve. Where the specialist course is given at an institution other than the teachers college—e.g. at a university, college of advanced education, technical college, or conservatorium of music, students are generally required to attend teachers college or university lectures in education, and in some cases the specialist course is followed by a year of professional training. Courses designed to train physical education teachers are offered in universities in some States, and in at least one teachers college in every State.



Training for teachers of agricultural subjects in secondary schools consists of either an agricultural college diploma or a university degree course together with professional teaching training. Teachers of technical subjects in secondary schools may be trained in manual or industrial arts courses of two to four years duration, at teachers colleges, colleges of advanced education, technical colleges, or, in one State, at a university.

At several Australian universities, students wishing to take up teaching as a profession can receive their professional training along with the study of their teaching subjects as part of a first degree course. Courses of a similar nature are available at some colleges of advanced education where teacher education courses are integrated into the general teaching of the college.

The following table shows students undergoing teacher education courses in government and non-government colleges in 1970. The figures exclude enrolments for short refresher courses and summer schools.

ENROLMENTS IN TEACHER EDUCATION (a), BY PLACE OF ENROLMENT AND TYPE OF COURSE: STATES AND A.C.T., 1970

	Government colleges(b)(c)						Non-government colleges			
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	All States	Kinder- garten	Other	All colleges
Enrolled at kindergarten teachers colleges	..	..	..	..	..	..	..	977	..	977
Enrolled at teachers college only—										
For primary teaching.	3,190	4,896	2,248	1,752	1,193	435	13,714	..	1,619	15,333
For secondary teaching	1,229	2,360	804	490	93	85	5,061	..	210	5,271
Not classifiable as primary or secondary teaching	47	..	34	..	..	..	81	..	..	81
<i>Total</i>	<i>4,466</i>	<i>7,256</i>	<i>3,086</i>	<i>2,242</i>	<i>1,286</i>	<i>520</i>	<i>18,856</i>	..	<i>1,829</i>	<i>20,685</i>
Enrolled at teachers college and also enrolled at university—										
For primary teaching.	..	76	..	286	52	..	414	..	61	475
For secondary teaching	4,108	5,068	758	1,340	846	..	12,120	..	56	12,176
<i>Total</i>	<i>4,108</i>	<i>5,144</i>	<i>758</i>	<i>1,626</i>	<i>898</i>	..	<i>12,534</i>	..	<i>117</i>	<i>12,651</i>
Also enrolled at college of advanced education—										
For primary teaching.	..	..	..	..	57	..	57	..	4	61
For secondary teaching	501	82	115	432	301	22	1,453	..	2	1,455
<i>Total</i>	<i>501</i>	<i>82</i>	<i>115</i>	<i>432</i>	<i>358</i>	<i>22</i>	<i>1,510</i>	..	<i>6</i>	<i>1,516</i>
Also enrolled at another institution—										
For secondary teaching	..	520	..	101	12	..	633	..	..	633
Not enrolled at teachers college(d)—										
For primary teaching.	388	..	..	..	..	60	448	..	..	448
For secondary teaching	2,336	..	..	..	..	538	2,874	..	..	2,874
Not classifiable as primary or secondary teaching	..	..	..	..	..	69	69	..	..	69
<i>Total</i>	<i>2,724</i>	..	..	..	..	<i>667</i>	<i>3,391</i>	..	..	<i>3,391</i>
Total enrolments—										
Departmental students(e)—										
1970	11,547	12,916	3,925	4,272	2,512	1,198	36,370	..	..	36,370
1969	9,994	11,526	3,621	3,783	2,249	1,124	32,297	..	..	32,297
Other students—										
1970	252	86	34	129	42	11	554	977	1,952	3,483
1969	295	88	22	135	39	8	587	877	1,584	3,048
All students—										
1970	11,799	13,002	3,959	4,401	2,554	1,209	36,924	977	1,952	39,853
1969	10,289	11,614	3,643	3,918	2,288	1,132	32,884	877	1,584	35,345

(a) Includes students enrolled at teachers colleges, whether or not they receive instruction at the college itself, and also departmental students (see footnote (d)) who are not enrolled at a teachers college. Students enrolled for courses specifically designed for practising teachers have been excluded, as have 184 non-award students enrolled in part-time courses at the Technical Teachers College, Victoria, and 203 technical teacher trainees in Victoria who are given one or two years industrial experience. (b) There are no government teachers colleges in the Northern Territory or the Australian Capital Territory. (c) Excludes students enrolled at the Australian School of Pacific Administration. In 1970 there were 36 students enrolled for primary teaching and 84 students for secondary teaching. (d) Departmental students enrolled at another institution, i.e. university or college of advanced education. (e) Departmental students are those students who have been awarded a State Education Department scholarship or fellowship and have entered into an agreement to teach for a specified period of teaching service after completion of their teacher education.



The following table shows departmental students enrolled in the first year of their course and also those enrolled in the final year of their course. The figures exclude enrolments in one year courses which are mainly extension courses for students who have qualified as teachers.

DEPARTMENTAL STUDENTS ENROLLED IN THE FIRST  
AND IN THE FINAL YEAR OF COURSE, 1970

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australia		
							Males	Females	Persons
Enrolled in the first year of a course	4,772	4,888	1,903	1,621	1,172	449	5,012	9,793	14,805
Enrolled in the final year of a course	2,297	3,263	1,259	1,092	748	339	2,851	6,147	8,998

*In-service training.* In-service training in Australia is directed chiefly towards keeping teachers abreast of developments and adding to their basic training. In-service training usually takes the form of short courses held sometimes during vacations, sometimes during school-time or in the evening. In some States in-service courses for teachers in remote areas are provided by correspondence. In some States there are also in-service courses for special groups of teachers such as headmasters or teachers in one-teacher schools. In addition, district inspectors are responsible for organising short conferences of teachers, where professional topics are discussed. Education departments encourage teachers to pursue university courses and in some States pay the cost of courses undertaken by selected teachers.

*Status of teachers.* Most teachers in government schools are permanent public servants and have security of tenure, superannuation rights, and the right of appeal in matters of promotion. The centralised education systems and the general policy of providing fully trained teachers for both city and country areas mean that teachers are subject to transfer to any part of the State in which they serve.

### Training of technical teachers

To preserve links with industry and trade practice, schemes have been developed for the recruitment of specialist tradesmen as teachers and for their training in educational method and teaching techniques. In Victoria, the Technical Teachers College provides training for students with appropriate diploma or trade qualifications and suitable industrial experience. In New South Wales, technical college lecturers and tradesmen-teachers receive an in-service course of teacher training in general education theory and teaching method, while correspondence courses and visiting lecturers assist the newly appointed tradesman-teacher in country colleges. Variations in this scheme are in operation in other States. Many technical teachers, principally of academic, commercial and domestic science subjects, hold trained teachers certificates from teachers colleges.

### Training of non-government school teachers

Teachers for non-government schools receive their training in a number of ways. The Roman Catholic Church staffs both its primary and secondary schools as far as possible with members of religious orders. In recent years there has been an increase in the number of lay teachers being employed in Catholic schools, and training of students to become lay primary teachers has been instituted.

Other non-government schools tend to recruit their staff from teachers who have already obtained qualifications in Australia or overseas. In New South Wales and Victoria, non-government school authorities offer courses designed specially for teachers in their schools. Non-government schools also recruit university graduates, who are then given professional guidance by senior members of the school staff. Private students may enrol at government teachers colleges on payment of a fee, but the number of places available is limited. The Commonwealth Government provides financial assistance to the States for approved building projects provided that the colleges admit a number of private students. Some teachers destined for non-government schools train in this way.

The following table shows, for non-government teachers colleges, the number of students enrolled, and the number in the final year of their courses.

NON-GOVERNMENT TEACHERS COLLEGES: ENROLMENTS(a), AUSTRALIA, 1970

	<i>Enrolments</i>			<i>Students in final year of course</i>		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
For primary teaching . . .	225	1,459	1,684	74	496	570
For secondary teaching . . .	141	128	269	27	26	53
<i>Total . . . . .</i>	<i>366</i>	<i>1,587</i>	<i>1,953</i>	<i>101</i>	<i>522</i>	<i>623</i>

(a) These figures include students taking university degree courses whether instruction is given at the university or the college. They exclude students at kindergarten teachers colleges.

During vacations many non-government teachers attend in-service training courses organised by education departments. In recent years vacation courses have been provided by bodies other than education departments for teachers from both government and non-government schools. For example, an independent body, the Science Foundation for Physics within the University of Sydney, has provided such courses for teachers of science in secondary schools in New South Wales.

#### Kindergarten teachers colleges

The kindergarten unions, which are non-government organisations, have established colleges providing three-year courses in all States except Tasmania, where an infant and pre-school course is provided by the Hobart Teachers College. The minimum entrance age is usually seventeen years and applicants with matriculation status are preferred. In New South Wales, the Sydney Day Nursery and Nursery Schools Association maintains a training college which provides a course for pre-school and kindergarten teachers. These colleges provide full-time diploma courses which are similar in content and standards. Teachers are trained for work with children between the ages of two and seven years.

In 1970 there were 977 students enrolled for diploma courses at kindergarten teachers colleges, of whom 278 were in their final year. There are no male students enrolled at kindergarten teachers colleges.

The Commonwealth Government provides financial assistance for pre-school teachers colleges. For details, *see* page 655.

### Technical education

Australian technical colleges offer training in all the major industrial skills and in a wide variety of commercial, artistic and domestic occupations. The main types of courses are described in Year Book No. 55, pages 498 and 499.

Technical colleges in Queensland, South Australia, Western Australia, and Tasmania are administered by branches of the State education departments. In Western Australia and South Australia, the Institutes of Technology function as autonomous institutions. New South Wales has a separate State Department of Technical Education. In Victoria there is a dual system with a number of the older colleges controlled by their own 'councils' in addition to government-controlled colleges administered by the Technical Education Branch of the Education Department. The council-controlled colleges receive government grants-in-aid. The diploma awarding schools or sections of technical institutions are in process of being separated from the trade, certificate and other sections of technical education, and of being developed as colleges of advanced education, and are now receiving Commonwealth financial assistance.

The numbers of colleges, teachers and enrolments in each State and Territory during 1969, and for Australia for the period 1965 to 1969 are given in the following table. The statistics include senior technical schools and colleges, institutes of technology and colleges of advanced education providing technical education, and their teachers and students at all levels. Whilst details for colleges of advanced education are included, the basis of collection differs from that used for advanced level courses statistics of which are given on pages 642-3.

**TECHNICAL EDUCATION: COLLEGES, TEACHERS AND ENROLMENTS  
STATES AND TERRITORIES, 1969**

	Colleges	Teachers			Students enrolled		
		Full-time	Part-time	Total	Males	Females	Persons
New South Wales(a)(b)(c)(d)	58	1,889	4,349	6,238	114,414	56,285	170,699
Victoria(e)	90	4,614	1,992	6,606	n.a.	n.a.	74,162
Queensland(d)	18	637	1,160	1,797	25,486	4,161	29,647
South Australia(d)	26	674	1,467	2,141	n.a.	n.a.	42,252
Western Australia(d)(f)(g)	93	874	1,790	2,664	42,353	27,577	69,930
Tasmania	9	186	627	813	5,888	2,276	8,164
Northern Territory	2	9	114	123	1,405	1,819	3,224
<b>Australia—1969</b>	<b>296</b>	<b>8,883</b>	<b>11,499</b>	<b>20,382</b>	<b>n.a.</b>	<b>n.a.</b>	<b>398,078</b>
1968	275	9,041	11,746	20,787	n.a.	n.a.	388,824
1967	230	8,071	11,144	19,215	n.a.	n.a.	376,915
1966	226	7,475	10,836	18,311	n.a.	n.a.	375,003
1965	222	6,774	9,974	16,748	n.a.	n.a.	360,755

(a) Students enrolled represent gross enrolments, no allowance having been made for students enrolled in more than one course. (b) Includes Australian Capital Territory. Gross enrolments at Canberra Technical College were 6,105 in 1969; 5,956 in 1968; 5,578 in 1967; 4,855 in 1966; and 4,267 in 1965. (c) Figures include teachers and students at technical colleges and other centres, such as high school classrooms, in which technical classes are conducted.

(d) Includes correspondence course teachers and students. (e) Prior to 1969 statistics of senior technical schools affiliated with the Victoria Institute of Colleges were included. Teachers include those at both senior and junior technical colleges. (f) Teachers represent number of teaching positions. (g) Country extension centres are now counted separately.

### Agricultural and forestry education

Agricultural faculties have been established in universities in all States. Seven provide degree courses in agricultural science, one in rural science, one in wool and pastoral sciences, one in agricultural economics and three in veterinary science. Besides undergraduate courses, these faculties collectively provide a wide range of post-graduate diploma courses as well as facilities for training for higher degrees and doctorates.

At least one government agricultural college in each State, except Tasmania, is a college of advanced education. The primary roles of these colleges is now to train students for professional extension work or technology roles in the agricultural services. Other colleges which aim to teach the principles and practices of agriculture and farm management to those intending to take up farming as a career, are being developed in New South Wales, Queensland, and Victoria. Tasmania's first agricultural college will commence at Hagley in 1973. It will be developed as a college of advanced education. The Marcus Oldham farm management college in Victoria is the only remaining independent institution of this type in Australia.

Training in forestry at undergraduate and post-graduate levels, is provided by a Department of Forestry in the Faculty of Science within the Australian National University's School of General Studies. A four-year degree course is offered, but the first year of this course may be undertaken, by arrangement, at any other university. At the Victorian School of Forestry, Creswick, a three-year diploma course can be taken.

State expenditure on agricultural and forestry education from Consolidated Revenue and certain special funds is shown on page 664.

### Other education

#### Conservatoria of music, schools of art, etc.

In addition to the conservatoria of music which are attached to universities or which constitute separate colleges of advanced education, there is the Canberra School of Music which offers a four-year full-time diploma course of theoretical and practical studies. Some schools of art have been developed into colleges of advanced education or included as departments in such colleges, and offer courses in printing, sculpture, and design as well as in basic art.

#### Educational training in the defence services

Each of the three defence services maintains institutions for the training of officers. The Royal Australian Naval College, Jervis Bay, Australian Capital Territory, became an affiliated college of the University of New South Wales in 1968. Selected matriculated cadets complete first year degree



studies in science or engineering at the College, and subsequent years of degree studies at the University. The Royal Military College, Duntroon, Australian Capital Territory, became an affiliated college of the University of New South Wales in 1968. The Royal Australian Air Force Academy, Point Cook, Victoria, has evolved from the Royal Australian Air Force College, which was established in 1948 as a tertiary training centre to provide a professional education for permanent officers of the Air Force. It is affiliated with the University of Melbourne and has adopted that University's Bachelor of Science course. The Academy is also permitted to present students for higher degrees in science and the degree of Doctor of Philosophy. Students may also proceed to the University of Sydney to take a degree in aeronautical engineering. The Australian Staff College and the Royal Australian Air Force Staff College provide one year courses for officers. Educational training is also provided in the apprentice training schools conducted by each of the Defence Services, and in the Royal Australian Navy School for Junior Recruits. The Royal Australian Air Force School of Languages, Point Cook, Victoria, conducts courses in French and Asian languages. In 1970 there were 34 students enrolled, of whom 5 were Royal Australian Air Force personnel.

The following table shows the number of officers, officer cadets and other ranks enrolled in the training establishments mentioned above.

**SERVICE ESTABLISHMENTS PROVIDING EDUCATIONAL TRAINING  
AUSTRALIA, 1970**

<i>Establishment</i>	<i>Enrolments</i>	<i>New entrants during year</i>	<i>Number completing course during year</i>
<b>OFFICERS AND OFFICER CADETS (a)</b>			
Staff Colleges—			
Australian Staff College . . . . .	70	70	70
Royal Australian Air Force Staff College . . . . .	30	30	30
Officer cadets—			
Royal Australian Navy—			
Royal Naval College . . . . .	100	26	19
H.M.A.S. <i>Leeuwin</i> . . . . .	2	..	2
Royal Military College . . . . .	264	n.a.	n.a.
Royal Australian Air Force—			
R.A.A.F. Academy . . . . .	88	29	13
R.A.A.F. Diploma Squadron . . . . .	157	49	20
<b>APPRENTICES AND OTHER RECRUITS (b)</b>			
Royal Australian Navy—			
Naval artificer apprentices . . . . .	645	205	160
Junior recruits . . . . .	770	770	556
Topmen scheme . . . . .	72	72	61
Army Apprentice School . . . . .	327	..	277
Royal Australian Air Force—			
School of Technical Training . . . . .	249	127	137
School of Radio . . . . .	85	51	35

(a) Includes 266 cadets enrolled for university courses, 3 enrolled at teachers college, and 157 enrolled at an institute of technology. (b) Includes 85 apprentices enrolled at a technical college or institute of technology.

**The Australian School of Pacific Administration**

The Australian School of Pacific Administration, controlled by the Department of Territories, trains students in the various aspects of service and administration in Commonwealth Territories, including teaching. In 1971, 80 trainee teachers were being trained for service in Papua-New Guinea, and 40 for the Northern Territory. In 1970 the school commenced courses in Local Government for Papuans and New Guineans.



### **Australian Administrative Staff College**

Opened in 1957, the Australian Administrative Staff College is a private organisation working in close co-operation with government and other public bodies, the armed services, and the trade union movement. It was founded, and is owned, by a large group of leading Australian companies and has its permanent premises at Mount Eliza, near Melbourne. The College conducts residential courses for administrators to further the study of the problems which arise in managerial work.

### **Technical training by government departments**

Although most needs of departments for trained staff are met by apprenticeship schemes and other technical college courses and by the universities, some departments provide training which is not available elsewhere. The most important field for which such training is provided is the training of telephone, telegraph, radio, and television technicians by the Postmaster-General's Department.

### **Migrant education**

The Department of Immigration is responsible for the teaching of English to migrants as part of its integration programme. Advice about migrant education and teaching materials are provided by the Department of Education and Science, and the courses are arranged in conjunction with State education departments, colleges of advanced education and other approved educational bodies.

The Australian Government allocates funds to the Intergovernmental Committee for European Migration which, in Greece, Italy, Germany, and Austria, provides class and correspondence instruction for intending migrants to Australia. Courses are also being organised by the Department in Turkey and Yugoslavia. A recorded English language course is in use in Finland. The governments of Holland, Belgium and Spain assist with courses conducted in these countries. Many migrants, however, receive their first instruction in English from shipboard education officers.

The Department of Education and Science, the State education departments, and the Australian Broadcasting Commission co-operate in producing a radio/correspondence course in English. In May 1971 an experimental television programme was commenced.

Accelerated English courses for migrants with a professional background were introduced in 1969. A special course 'English for Migrants in Industry' has been prepared for use in factories and other places of employment.

### **Adult education**

The term 'adult education' as used in Australia refers mainly to non-vocational educational and cultural activities for adults. While the nature of the recognised adult education authorities varies from State to State, their major activities have many common features. Regular courses of lectures are organised on such topics as literature, music, drama, international affairs, languages, and crafts. Some authorities also organise discussion groups, festivals and summer schools, and provide special services for groups in remote areas. In 1960 an Australian Association of Adult Education was formed, and its first annual conference was held in Adelaide in 1961. The Association handles matters pertaining to adult education at a national level and arranges liaison with similar bodies in other countries.

One of the first bodies active in the field of adult education in Australia was the Workers' Educational Association, which formed associations in all States in 1913. Its aims were to bring the universities into closer relationship with the community in general and to provide for higher education in civic and cultural subjects. These associations have been superseded by Adult Education Boards or Councils set up by the State governments in Victoria, Queensland, and Tasmania, and by the university in Western Australia. In the other two States, New South Wales and South Australia, the associations continue to co-operate with the universities in their extension work and are given direct grants by the governments concerned.

There are throughout Australia various other organisations which are active in the field of adult education. The World Education Fellowship, for example (*see page 650*), since its inception in Australia has been interested in adult education.

The organisation of adult education and some of the activities in each State are described in Year Book No. 53, pages 625 to 627.

### Overseas students

Information about overseas students in Australia is available from three statistical series. The Department of Education and Science compiles statistics of *government sponsored overseas students* in Australia. The statistics of government sponsored students in institutions of higher learning are compiled from records held by that Department; those of other government sponsored students are estimates from information held by the Department of Foreign Affairs. In June 1970, there were 1,626 government sponsored overseas students in institutions of higher learning, and 681 other government sponsored students. These figures exclude some personnel of overseas armed forces taking courses at Australian Defence Colleges. Altogether, there were just over 2,300 government sponsored overseas students in Australia in 1970. Students under the Colombo Plan Technical Co-operation Scheme numbered 1,660. The largest numbers of government sponsored students came from Malaysia, Indonesia, Singapore, and Thailand.

The Department of Immigration prepares statistics of overseas students in Australia who have been admitted under the *Private Overseas Student Programme*. In 1970, there were 10,057 students (6,998 males and 3,059 females) undertaking courses or training in Australia under the Programme; 5,373 from Malaysia, 1,578 from Hong Kong, and 979 from Singapore. Courses chosen were mainly in engineering and building (1,706), economics and commerce (1,411), medicine (including para-medical) and dentistry (1,639), and general and school courses (2,775).

*Overseas students enrolled for advanced level courses* in Australian education institutions are enumerated annually. The institutions reported some 7,474 enrolments in 1970, about 5,863 at universities, 1,374 at colleges of advanced education and some 237 at other institutions.

## Organisations associated with education

### Australian Council for Educational Research

The Australian Council for Educational Research, a non-governmental body, is engaged on educational research in a wide variety of fields, ranging from tertiary to pre-school education. It conducts surveys and inquiries, makes grants to approved educational investigators, serves as a centre for disseminating educational information, provides training for research workers, and standardises and distributes educational and psychological tests for use in Australia. Although this council is an autonomous body, the Commonwealth and State governments give substantial financial support.

### World Education Fellowship

The World Education Fellowship is a world organisation of parents, educators and other citizens interested in the development of new educational practices. It was founded in London in 1915 and spread to Australia at the time of a regional conference held here in 1937. There are now sections in each State. Its Australia-wide journal *New Horizons in Education* is published twice a year.

### Australian College of Education

The Australian College of Education was formed in 1959. Its aims are to bring together leading teachers and administrators in every field of education, to raise the standard of the profession of education in Australia, to establish and proclaim fundamental educational values, and to recognise outstanding contributions to educational practice. Chapters of the College have been set up in all States, and several of the addresses and papers delivered at meetings of the College have been issued in published form.

## Commonwealth activities in education

### Fields of activity

Although education is primarily the responsibility of the States, the Commonwealth has instituted a number of measures of direct assistance to educational institutions and to students. It is responsible for public education in its own Territories and is engaged in educational activities incidental to its responsibilities in such areas as defence, external relations, immigration, and social services. Education in Commonwealth Territories is outlined in Chapter 29, The Territories of Australia; various schools and colleges for the Defence Services are referred to on page 647, and other activities which may be considered broadly as educational are referred to in the section on Broadcasting and Television in Chapter 12, Transport, Communication and Travel. Details of Commonwealth expenditure on education are provided on pages 659-64.

### Department of Education and Science

The Commonwealth Department of Education and Science was created in December 1966. The Department, which absorbed the former Education Division of the Prime Minister's Department including the Commonwealth Office of Education, and subsequently, in 1968, the Education Branch of the Department of the Interior, is concerned with direct grants for educational purposes, e.g. for universities, colleges of advanced education, school libraries, technical schools, and science buildings, as well as with grants for building teachers and pre-school teachers colleges. It is responsible for assistance to students for the various Commonwealth scholarship schemes, for the scheme of Queen Elizabeth II Fellowships, and for special scholarships offered by overseas countries for Australians. Among the Department's other responsibilities are matters in the field of international relations in education, including UNESCO and Commonwealth Co-operation in Education, and liaison with State and other education bodies throughout Australia. The Department provides professional advice on education to other Commonwealth departments and authorities. It administers grants to such bodies as the Academy of Science, the Humanities Research Council, the Social Sciences Research Council and the Institute of Aboriginal Studies, and is responsible for grants for scientific research such as those recommended by the Australian Research Grants Committee. It administers educational services in the Australian Capital Territory.

The *Australian Universities Commission* and the *Commonwealth Advisory Committee on Advanced Education* are responsible to the Minister for Education and Science. The Minister is also responsible for the *Commonwealth Scientific and Industrial Research Organization*, the *National Standards Commission*, the *Australian National University*, the *Institute of Aboriginal Studies*, and the *College of Advanced Education* in Canberra. The Department of the Environment, Aborigines and the Arts is responsible for the National Library and for art, literature and other cultural activities in which the Commonwealth is interested.

### Commonwealth Scholarships Board

This Board, under its former title of the Universities Commission, was established by the *Education Act 1945*. Prior to 1945 the Commission had functioned under wartime National Security Regulations. The Board consists of a chairman and three other members. The main responsibility of the Board, at present, is advising the Government on the policy and administration of Commonwealth university and advanced education scholarships and Commonwealth post-graduate awards. For a brief description of each type of award, see page 656.

### Advisory bodies

The Commonwealth Government has established various advisory bodies whose fields of concern relate to matters of education. Already mentioned above is the Australian Universities Commission, which advises the Commonwealth Government on university development. The Commonwealth Advisory Committee on Advanced Education advises the Minister on the balanced development of tertiary education outside universities. Within financial limits nominated by the Minister, the Committee recommends grants to the States for colleges of advanced education and directs grants to any such colleges established by the Commonwealth. The Australian Research Grants Committee advises the Minister on the merit of applications for research grants from individuals and research teams, and suggests the allocation of funds. The Queen Elizabeth II Fellowships Committee advises the Minister on the merit of applicants for these fellowships, which are awarded for post-doctoral study in the physical and biological sciences, and advises generally on the administration of this scheme of fellowships. The Australian Advisory Committee on Research and Development was established in 1970. Its functions are to initiate research in areas of importance in education, to recommend assistance for the training of educational research personnel and to direct attention to the application of research findings.

### International relations

An account of the relations and exchanges in the field of education before 1969 between Australia and other countries can be found in Year Book No. 55, pages 526-527.

A seven-member delegation from Australia attended the Sixteenth Session of the UNESCO General Conference held in Paris in October-November 1970. In addition to considering the UNESCO Programme and Budget for 1971-72, the delegation also contributed to discussions on the Long-Term Outline Plan for further activities (1971 to 1976).

The Department of Education and Science arranged for several specialists sponsored by UNESCO to visit Australia and to confer with and advise Australian experts. They attended the Australian



UNESCO Seminars on Development in Schools of a Critical Study of Film and Television (Melbourne) and the Role of Libraries in Secondary Education (Sydney). In addition the Director-General of UNESCO sponsored an Australian visit by a consultant in the preservation of anthropological and primitive art material.

Under the programme of Commonwealth Co-operation in Education special teaching courses were arranged in 1970 by the Department of Education and Science. A two-year course in infant teaching methods conducted by the New South Wales Department of Education was completed by a group of Ugandan infant teachers. The South Australian Education Department conducted a one-year refresher course in primary teaching methods, which was attended by teachers from Zambia, Nigeria, Tanzania, Botswana, Fiji, New Hebrides and the Gilbert and Ellice Islands. The University of Queensland conducted a one-year course leading to a Certificate of Education for Overseas Teachers. A six-months mathematics workshop for overseas teachers was conducted by Macquarie University in 1970. It was attended by teachers from Malawi, Tanzania, Swaziland, Mauritius, Tonga, Western Samoa, Guyana and Lesotho.

Under the programme of Commonwealth Co-operation in Education the Department of Education and Science arranged short study programmes in Australia for a group of senior educationists from Africa, the West Indies and the Pacific and recruited Australian educationists to occupy key posts in developing countries of the Commonwealth.

Under the Commonwealth Scholarship and Fellowship Plan, the Department of Education and Science was responsible for the award of Australian scholarships to students from other Commonwealth countries and for the nomination of Australian graduates for awards offered by other Commonwealth countries.

Although arrangements for educational assistance for the award of scholarships are made on a bilateral basis between the relevant Commonwealth countries, a Commonwealth Education Liaison Committee in London acts on matters of common interest. The Department of Education and Science liaises with the Australian representative of this Committee.

The Department of Education and Science acts as the selection agency for post-graduate scholarships offered to Australian students by other governments. In 1970 scholarships were offered by twenty-one governments to Australian scholars. The Department is also responsible for the administrative procedures in connection with selection for the various types of travel grants offered by the Australian-American Educational Foundation to Australian scholars and educationists for study in the United States of America. Sixty-seven Australians and thirty-three Americans took up the awards offered by the Foundation in 1970.

### Commonwealth grants for education purposes

*Grants for research purposes.* The Second Report of the Australian Universities Commission recommended that during the calendar years 1964, 1965 and 1966 a total of \$10 million should be provided for universities to support research activities at the post-graduate level, half the sum to be provided by the Commonwealth and half by the States. The Australian Research Grants Committee, which is entrusted with the task of advising on the allocation for particular research projects, was established in April-May 1965 under the chairmanship of Professor R. N. Robertson. Its immediate function was to advise the Commonwealth on the distribution of the \$4 million for the year 1966.

At the beginning of 1967 it was decided that the Committee would continue to function through the 1967-1969 triennium, and was asked to recommend to the Commonwealth Government the distribution of \$9.2 million for the triennium, to be provided solely by the Commonwealth. Details of the distribution of this money may be obtained from the *Australian Research Grants Committee, Report 1967-69*. An amount of \$12.5 million (later increased to \$13.1 million to cover rises in academic salaries) was allocated by the Commonwealth for the 1970-72 triennium and details of its distribution can be obtained from *Grants Approved for 1970* and *Grants Approved for 1971* published by the Committee. A report for the 1970-72 triennium will be published in mid 1972. For details of Commonwealth expenditure under the scheme in 1969-70 see page 662.

*Grants for universities.* Australian universities depend greatly on government grants for their income. In 1968 income from other than Commonwealth and State grants amounted to just over one-fifth of the total income. Commonwealth grants to the States for universities are made on the recommendation of the Australian Universities Commission which was established by the Commonwealth Government under the *Australian Universities Commission Act 1959*. The principal function of the Commission is to advise the Minister for Education and Science on financial assistance for the maintenance and balanced development of Australian universities. The Commission commenced its work in July, 1959. An historical summary of the financial assistance provided for universities by the Commonwealth Government in the past is given in Year Book No. 55, pages 515-18.



The Fourth Report of the Australian Universities Commission was published in 1969. It recommended Commonwealth grants to the States for State universities of over \$225 million for the triennium 1970-72. In addition, it recommended grants totalling \$88 million for the Australian National University. These recommendations were accepted by the Government and the grants to State universities were given effect in the *States Grants (Universities) Act 1969-1970*. A summary of the maximum grants supported by the Commonwealth for all universities for the 1970-72 triennium and for the 1964-66 and 1967-69 triennia is shown in the following tables and details of Commonwealth payments for universities are given on pages 659-60 and 662.

**ALL UNIVERSITIES: SUMMARY OF MAXIMUM COMMONWEALTH GRANTS FOR  
THE 1964-66, 1967-69 AND 1970-72 TRIENNA**  
(\$'000)

<i>Type of grant</i>	<i>1964-66</i>	<i>1967-69</i>	<i>1970-72</i>
<b>Recurrent grants—</b>			
General . . . . .	120,833	174,970	252,128
Teaching hospitals . . . . .	369	809	1,036
Student residences . . . . .	1,427	1,938	2,541
<i>Total recurrent grants</i> . . . . .	<i>122,629</i>	<i>177,717</i>	<i>255,705</i>
<b>Capital grants—</b>			
Building projects . . . . .	40,231	50,683	58,896
Teaching hospitals . . . . .	3,112	4,927	2,560
Student residences . . . . .	9,244	12,693	11,967
Computers . . . . .	1,098	985	1,022
Capital equipment . . . . .	..	..	1,025
<i>Total capital grants</i> . . . . .	<i>53,685</i>	<i>69,288</i>	<i>75,470</i>
Research . . . . .	6,000	3,000	4,000
<b>Total Commonwealth grants for all universities</b> . . . . .	<b>182,314</b>	<b>250,005</b>	<b>335,175</b>

The Commonwealth makes the above grants available to the States on the following bases.

<i>Grant</i>	<i>Basis</i>
<b>Recurrent—</b>	
University recurrent expenditure . . . . .	\$1 Commonwealth for every \$1.85 of income from fees and State grants
Teaching hospitals recurrent expenditure . . . . .	\$1 Commonwealth for every \$1.85 of State grants
Teaching and administrative costs of halls of residence and residential colleges	No matching grant required
<b>Capital—</b>	
Building projects in universities and teaching hospitals	\$1 Commonwealth for every \$1 of State grants
Building projects at residential colleges and halls of residence	\$1 Commonwealth for every \$1 of college funds and/or State grants
<b>Research—</b>	
Research and research training . . . . .	\$1 Commonwealth for every \$1 of State grants

Details of the maximum Commonwealth grants to each State for 1970-72 triennium are shown in the following table.

**MAXIMUM COMMONWEALTH GRANTS TO UNIVERSITIES FOR THE 1970-72 TRIENNium**  
(*\$'000*)

<i>Type of grant</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>Recurrent grants—</b>								
General . . . . .	69,604	47,382	22,088	17,027	11,602	5,293	(a)79,132	252,128
Teaching hospitals . . . . .	390	371	134	64	53	25	..	1,036
Student residences . . . . .	791	649	444	121	162	133	241	2,541
<i>Total recurrent grants</i> . . . . .	<i>70,785</i>	<i>48,402</i>	<i>22,666</i>	<i>17,212</i>	<i>11,817</i>	<i>5,451</i>	<i>79,373</i>	<i>255,705</i>
<b>Capital grants—</b>								
Building projects . . . . .	18,945	14,377	6,105	4,633	2,563	1,267	11,006	58,896
Teaching hospitals . . . . .	883	583	310	23	761	..	..	2,560
Student residences . . . . .	3,777	3,013	807	675	355	542	2,798	11,967
Computers . . . . .	450	..	225	113	234	..	..	1,022
Capital equipment . . . . .	405	237	135	110	63	25	50	1,025
<i>Total capital grants</i> . . . . .	<i>24,459</i>	<i>18,210</i>	<i>7,582</i>	<i>5,554</i>	<i>3,976</i>	<i>1,834</i>	<i>13,854</i>	<i>75,470</i>
Research . . . . .	1,470	1,097	463	560	285	125	..	4,000
<b>Total grants</b> . . . . .	<b>96,714</b>	<b>67,709</b>	<b>30,711</b>	<b>23,326</b>	<b>16,078</b>	<b>7,410</b>	<b>93,227</b>	<b>335,175</b>

(a) Includes special grants for research and research training.

*Grants for colleges of advanced education.* The Commonwealth continues to be advised by the Commonwealth Advisory Committee on Advanced Education. The following tables provide details of grants for the 1967-69 and 1970-72 triennia.

**COLLEGES OF ADVANCED EDUCATION**  
**SUMMARY OF MAXIMUM COMMONWEALTH**  
**GRANTS FOR THE 1967-69 AND 1970-72 TRIENNIA**  
(*\$ million*)

<i>Type of grant</i>	<i>1967-69</i>	<i>1970-72</i>
Recurrent grants . . . . .	20.89	55.11
Capital grants . . . . .	26.26	57.12
Special grants for libraries . . . . .	0.50	0.50
Provision for research . . . . .	0.25	0.25
<b>Total</b> . . . . .	<b>47.90</b>	<b>112.98</b>

The Commonwealth makes the above grants available to the States on the following bases.

<i>Grant</i>	<i>Basis</i>
Recurrent . . . . .	\$1 Commonwealth for every \$1.85 of income from fees and State grants
Capital . . . . .	\$1 Commonwealth for every \$1 State
Libraries . . . . .	No matching grant required
Research . . . . .	No matching grant required

**COLLEGES OF ADVANCED EDUCATION**  
**MAXIMUM COMMONWEALTH GRANTS FOR THE 1970-72 TRIENNium**  
(*\$'000*)

<i>Type of grant</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Recurrent grants . . . . .	9,051	19,927	5,391	4,666	7,611	2,363	(a)6,097	55,106
Capital grants . . . . .	15,394	15,000	6,400	5,078	4,250	3,250	7,750	57,122
Special grants for libraries(b) . . . . .	..	..	..	..	..	..	..	500
Provision for research(b) . . . . .	..	..	..	..	..	..	..	250
<b>Total</b> . . . . .	<b>24,445</b>	<b>34,927</b>	<b>11,791</b>	<b>9,744</b>	<b>11,861</b>	<b>5,613</b>	<b>13,847</b>	<b>112,978</b>

(a) Grants less fees received. (b) State details of expenditure on this item are not yet separately available.

*Grants for technical colleges.* The scheme began in July 1964 and between that date and June 1970, the amount made available totalled \$57,465,000. Funds are now being provided at the rate of \$12 million per year and, since the introduction of the Advanced Education Programme, are being devoted almost entirely to apprentice and technical training. The maximum amounts available to the States during the triennium ending 30 June 1974 are shown in the following table. For details of payments made under the Act during 1969–70, see page 662.

**TECHNICAL TRAINING: MAXIMUM COMMONWEALTH GRANTS  
FOR THE TRIENNIUM ENDING 30 JUNE 1974**

(\$'000)

<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>All States</i>
13,320	10,030	5,250	3,390	2,870	1,140	36,000

*Grants for teachers colleges.* The Commonwealth Government reviewed its policy on teachers colleges in 1969 and decided that the unmatched capital grants made to the States should be increased to \$30 million in the next triennium as against \$24 million in the triennium 1968–70. The maximum amounts available to the States during the triennium ending 30 June 1973 are shown in the following table. For details of payments made under the Act during 1969–70, see page 662.

**TEACHERS COLLEGES: MAXIMUM COMMONWEALTH GRANTS  
FOR THE TRIENNIUM ENDING 30 JUNE 1973**

(\$'000)

<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>All States</i>
9,900	9,500	3,000	3,600	3,000	1,000	30,000

The Commonwealth also decided to support the introduction of teacher education into the colleges of advanced education and to provide funds for this purpose under the normal sharing arrangements for expenditure on colleges of advanced education in the States. During the triennium ending 30 June 1974, teacher training will be supported at colleges of advanced education located at Bathurst and Wagga in New South Wales; Toowoomba and Rockhampton in Queensland; and at Hobart in Tasmania. Teacher education commenced at the Canberra College of advanced education in 1971.

In addition the Commonwealth Government introduced a new programme to assist the training of pre-school teachers. Legislation enacted in December 1968 provided \$2.5 million for pre-school teacher training facilities during the period 2 December 1968 to 30 June 1971, that is planned to double the existing capacity of training colleges in the States. Legislation has been passed to extend the period of operation of the *States Grants (Pre-School Teachers Colleges) Act* 1968 from 2 December 1968 to 31 December 1972. The amount of money provided is unchanged. For details of payments made under the Act during 1969–70, see page 662. Pre-school teacher training is a function of the State Education Department in Tasmania and in other States it is administered by private organisations.

*Per capita grants to independent schools.* A provision announced by the Commonwealth Government in 1969 was that of annual per capita grants to independent schools within the States. Since 1970 payments have been made to these schools at the rate of \$35 for each primary student and \$50 for each secondary student. The grants are intended to assist independent schools with their running costs.

*Grants for science laboratories.* From July 1968 to June 1971, \$37.7 million was distributed to the States in unmatched grants for science buildings and equipment in government and non-government secondary schools. Grants to State schools have been provided on the basis of lists of projects agreed to between the Commonwealth and State Ministers of Education, whilst grants to independent schools are approved by the Commonwealth Minister for Education and Science on the basis of reports by an Advisory Committee on Standards for Science Facilities in Independent Schools, and State advisory committees representing independent schools. Non-government schools in the Australian Capital Territory and the Northern Territory will receive grants for science facilities and for school libraries in conjunction with the capital aid scheme under which the Commonwealth Government meets interest charges on loans and also repays, in equal annual instalments, the costs for school building projects. For details of payments made under the Act during 1969–70, see page 662.



*Grants for library facilities in secondary schools.* During the three-year period January 1969 to December 1971, the Commonwealth is distributing \$27 million for the development of library facilities (erection, alteration or extension of library buildings and provision of furniture, equipment, books, and library materials) in government and independent secondary schools in the States. Besides the Commonwealth Secondary Schools Libraries Committee, the Commonwealth, as with the science facilities scheme, has the advice of two committees in each State, one representative of the Roman Catholic secondary schools and the other representative of other non-government secondary schools. The maximum amounts available to the States during the triennium are shown below. For details of payments made under the Act during 1969-70, see page 662.

**SECONDARY SCHOOL LIBRARIES: MAXIMUM COMMONWEALTH  
GRANTS FOR THE TRIENNIUM ENDING 31 DECEMBER 1971**  
(\$'000)

<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>All States</i>
9,984	7,591	3,945	2,576	2,032	873	27,000

As a contribution towards meeting the urgent need for more trained librarians to staff the new and existing libraries, further funds were made available during 1969-70. The funds enabled the Commonwealth to sponsor several short specialist courses in school librarianship in conjunction with State education departments and independent school authorities. The courses were available to teachers from government and independent schools. Eight courses, which 373 persons attended, were held during 1969. Further funds were made available during 1970-71, and the many courses organised were attended by school teacher librarians, principals, subject teachers, teachers college lecturers and principals, educational administrators and university and advanced education college teacher training staff.

#### Assistance to students

*Commonwealth scholarships.* The Commonwealth Government provides financial assistance to students through five major scholarship schemes. A total of 28,300 new awards were made available in 1971 under these schemes.

Under the Commonwealth Post-graduate Research Awards Scheme 700 new awards were made available in 1971 for students undertaking research leading to higher degrees at Australian universities. The awards are for full-time study and may be renewed annually up to a maximum period of four years. In 1971, 100 awards were made available for the first time under a new scheme of Commonwealth Post-graduate Course Awards for full-time students taking Masters degrees by course work. Both groups of awards carry a stipend of \$2,600 per annum and certain other allowances.

The Commonwealth University Scholarship Scheme made provision for 12,500 scholarships in 1971. Of these, 8,500 are open entrance scholarships which are allocated amongst the States in proportion to population and are awarded on the basis of results achieved in Australian matriculation examinations. The remaining 4,000 scholarships are Later Year Awards for students who have already completed one or more years of a university course. A small quota of awards from each group is set aside as Mature Age Scholarships for students who have reached the age of thirty years. Scholarship holders have their fees paid and may receive a living allowance subject to a means test. The maximum rates of living allowances are \$1,100 per annum in the case of scholars living away from their parents and \$700 for scholars living with parents.

The Commonwealth Advanced Education Scholarship Scheme made provision for 2,500 scholarships in 1971 for students taking approved courses of advanced education at institutions other than universities. Benefits are similar to those for university scholarships.

In 1964 the Commonwealth Government also introduced the Commonwealth Technical Scholarship Scheme under which it makes available 2,500 new awards annually to assist students to take approved technical courses. Most of these courses are at certificate level in technical colleges. Full-time technical scholarship holders receive the same benefits as Commonwealth secondary scholars. The benefits paid each year to part-time technical scholars are an allowance of \$100, free of means test, and reimbursement of compulsory fees up to a maximum of \$100.

Under the Commonwealth Secondary Scholarship Scheme students compete each year for 10,000 scholarships to assist them during the final two years at secondary school. Secondary scholarship benefits are free of means test and comprise a yearly living allowance of \$200, a textbook and equipment allowance of \$50 per annum and reimbursement of compulsory fees up to a maximum of \$150 per annum.



**COMMONWEALTH SCHOLARSHIPS: NUMBERS OF SCHOLARS IN TRAINING**  
30 JUNE 1970

<i>Type of award</i>	<i>N.S.W.(a)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(b)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust</i>
Post-graduate—							
Granted—							
In 1970 . . . . .	287	169	73	74	29	14	646
Prior to 1970 . . . . .	482	268	125	125	60	24	1,084
<i>Total</i> . . . . .	769	437	198	199	89	38	1,730
University scholarship—							
Granted—							
In 1970 . . . . .	4,434	2,938	1,518	973	757	278	10,898
Prior to 1970 . . . . .	7,076	6,050	2,791	1,897	1,288	510	19,612
<i>Total</i> . . . . .	11,510	8,988	4,309	2,870	2,045	788	30,510
Advanced education scholarship—							
Granted—							
In 1970 . . . . .	739	988	465	335	222	71	2,820
Prior to 1970 . . . . .	417	711	299	153	177	79	1,836
<i>Total</i> . . . . .	1,156	1,699	764	488	399	150	4,656
Technical scholarship—							
Granted—							
In 1970 . . . . .	1,001	692	332	247	192	82	2,546
Prior to 1970 . . . . .	720	675	233	275	68	63	2,034
<i>Total</i> . . . . .	1,721	1,367	565	522	260	145	4,580
Secondary scholarship—							
Granted—							
In 1970 . . . . .	3,685	2,812	1,414	958	771	314	9,954
Prior to 1970 . . . . .	3,757	2,566	1,388	959	704	244	9,618
<i>Total</i> . . . . .	7,442	5,378	2,802	1,917	1,475	558	19,572

(a) Includes the Australian Capital Territory.

(b) Includes the Northern Territory.

*Australian Agricultural Council Scholarships.* At the request of the Australian Agricultural Council the Department of Primary Industry makes available from the Commonwealth Extension Services Grant funds 12 scholarships annually (two in each State) to students in Australia who have qualified for a Commonwealth university scholarship and who wish to proceed to an approved course of study leading to a degree in Agricultural Science, Agricultural Engineering, Agricultural Economics, Rural Science or Veterinary Science. The purpose of the awards is to foster interest in agriculture and related fields of study.

As at 30 June 1971, there were 54 students holding Agricultural Council scholarships in Australia.

*Aboriginal Study Grants.* Awards under the Aboriginal Study Grants Scheme have been made since 1969 to assist Aborigines to take courses of study after leaving school. They provide full-time students with fees, a living allowance of \$1,100 per annum and other allowances; and the part-time students with fees and incidental expenses. In 1970, 305 students held grants.

*Aboriginal Secondary Grants.* The scheme was introduced in 1970 when 2,379 students received assistance. This scheme assists students to continue schooling beyond the school leaving age by paying living costs, fees and other allowances.

### Expenditure on education

The first part of this section summarises, on an Australian National Accounts basis, total expenditure on education, while the second and third parts show expenditure on education by the Commonwealth and States respectively.

#### Summary of expenditure on education

The presentation in the following tables is based on the Australian National Accounts. The figures exclude expenditure on goods and services which do not enter the market, such as education provided in the home, or for which it is not practical to impute a value, such as the unpaid services of some teachers, or certain educational services which cannot be separated readily from other services, such as instruction on the job. Most of the education services provided by public authorities are included. Some education services are provided by trading enterprises, such as business colleges, but it is not possible to provide separate figures of their transactions. Nor is it possible to provide separate figures

for the expenditure of non-profit organisations, such as non-government schools. Information for these organisations is insufficient to make direct estimates of the cost value of their services. Their contribution is included as part of personal consumption expenditure on education.

Current and capital transactions are shown separately. Current expenditure by public authorities on goods and services classified to education is measured net of receipts, such as fees. These fees are included in private consumption expenditure. Gross fixed capital expenditure represents the value of new capital assets, such as new buildings and additions to buildings, equipment, etc. While it is possible to show to some extent details of education expenditure incurred by the various public authorities, it is not possible to provide consistent figures in total of expenditure on various types of education. Generally, expenditure on libraries, cultural activities, and the like is excluded from 'education', as are most education services provided in the armed forces, by child welfare institutions, and those provided by governments and private employers for their employees, other than teacher education. Identifiable expenditure on education administration and educational research is, however, included. In many cases strict definitions cannot be applied. Thus it is not possible to differentiate between the components of scholarships which are intended for education fees, textbooks, etc. (clearly education expenditure) and those intended as living allowances. University research cannot be separated from university expenditure on teaching. With the exception of expenditure on fees, private expenditure on education (such as for books, equipment provided by parents associations, and the like) cannot be identified and is therefore excluded.

**ESTIMATES OF EXPENDITURE ON EDUCATION: AUSTRALIA**  
**1965-66 TO 1969-70**  
(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70p
<b>PUBLIC AUTHORITY SECTOR</b>					
Direct expenditure on goods and services classified to education(a)—					
Net current expenditure—					
Commonwealth authorities . . . . .	19	23	27	32	40
State and local government authorities . . . . .	499	556	625	705	828
<i>Total net current expenditure . . . . .</i>	<i>518</i>	<i>578</i>	<i>652</i>	<i>737</i>	<i>868</i>
Gross fixed capital expenditure—					
Commonwealth authorities . . . . .	9	10	13	13	16
State and local government authorities . . . . .	154	161	167	192	210
<i>Total gross fixed capital expenditure . . . . .</i>	<i>163</i>	<i>171</i>	<i>179</i>	<i>205</i>	<i>226</i>
Total direct expenditure—					
Commonwealth authorities . . . . .	28	33	40	45	56
State and local government authorities . . . . .	652	717	791	897	1,038
<i>Total, public authority sector . . . . .</i>	<i>681</i>	<i>749</i>	<i>831</i>	<i>942</i>	<i>1,094</i>
<b>PRIVATE SECTOR(a)</b>					
Personal consumption expenditure on education . . . . .	110	119	133	145	156
Gross private fixed capital expenditure on education . . . . .	32	35	31	27	37
<i>Total, private sector . . . . .</i>	<i>142</i>	<i>154</i>	<i>164</i>	<i>172</i>	<i>193</i>
<b>TOTAL EXPENDITURE ON EDUCATION</b>					
Grand total . . . . .	823	903	995	1,114	1,287

(a) Transfer payments from the public authority to the private sector for educational purposes are included in private sector expenditure and therefore excluded from the public authority sector expenditure.

Direct expenditure of public authorities excludes government payments to persons and non-profit organisations. Such transfer payments from the public authority to the private sector consist mainly of scholarships to persons and grants to non-government schools. They include all scholarship payments, whether or not they are intended towards the payment of fees or towards living expenses. Total government expenditure on education, including such transfer payments, is set out in the following table.

**ESTIMATES OF PUBLIC AUTHORITY EXPENDITURE ON EDUCATION: AUSTRALIA**  
**1965-66 TO 1969-70**  
(\$ million)

	1965-66	1966-67	1967-68	1968-69	1969-70
Direct expenditure of public authorities . . . . .	681	749	831	942	1,094
Transfer payments to the private sector—					
Cash benefits—					
From Commonwealth authorities . . . . .	21	27	28	32	37
From State and local government authorities . . . . .	12	13	17	22	27
Grants towards private capital expenditure—					
From Commonwealth authorities . . . . .	..	..	1	1	1
From State and local government authorities . . . . .	3	4	7	7	8
Total transfer payments . . . . .	37	45	54	62	73
Total expenditure on education by public authority sector . . . . .	717	794	884	1,004	1,167

Because of conceptual and accounting differences the figures above are not strictly comparable with figures of State expenditure on schools, technical education, etc., Commonwealth expenditure on education, and university expenditure shown in other sections of this chapter.

### Commonwealth expenditure on education

An analysis by major function of Commonwealth expenditure is provided in the following table. Current direct expenditure includes the cost of the Department of Education and Science, the Australian Universities Commission and other administrative expenditure, expenditure by the Australian National University, the Canberra College of Advanced Education, and the provision of education services in the Australian Capital Territory and the Northern Territory (including reimbursements to States for educational services in these Territories, such amounts being excluded from State expenditure). Capital expenditure relates mainly to expenditure on new buildings and equipment by the Australian National University and the Canberra College of Advanced Education, and for schools, etc. in the Northern Territory and the Australian Capital Territory. Commonwealth figures shown in the tables above differ from those shown in the following table because: education grants to the States by the Commonwealth (mainly for universities, science facilities in State schools, technical schools, and colleges of advanced education) are included in the following table, while expenditure by the States from current education grants is excluded from State education expenditure figures on pages 664-5, grants by the Commonwealth Government to the Australian National University and the Canberra College of Advanced Education are shown on page 660, while only the actual net expenditure by these institutions is included in Commonwealth direct expenditure on page 658. For later details of Commonwealth Government outlays in the field of education, see *Public Authority Finance: Commonwealth Authorities 1970-71* (Reference No. 5.12) page 20, compiled in accordance with national accounting concepts.

**COMMONWEALTH GOVERNMENT EXPENDITURE ON EDUCATION, 1965-66 TO 1969-70**  
(\$'000)

Items of expenditure	1965-66	1966-67	1967-68	1968-69	1969-70 <sup>p</sup>
Expenditure on goods and services—					
Department of Education and Science—					
Current . . . . .	1,509	2,131	3,007	3,916	5,167
Capital . . . . .	..	9	48	125	55
Australian Universities Commission—					
Current . . . . .	155	195	197	217	229
Australian Broadcasting Commission—					
Current . . . . .	716	888	817	873	902
Australian Capital Territory—					
Current . . . . .	4,451	5,254	6,156	7,508	8,591
Capital . . . . .	3,507	4,652	4,770	4,731	6,735
Northern Territory—					
Current . . . . .	1,472	1,641	2,240	2,920	3,707
Capital . . . . .	1,504	1,242	992	1,459	2,985

COMMONWEALTH GOVERNMENT EXPENDITURE ON EDUCATION, 1965-66 TO 1969-70—  
continued  
(\$'000)

Items of expenditure	1965-66	1966-67	1967-68	1968-69	1969-70p
Aboriginal—					
Current . . . . .	53	134	1,215	1,701	1,932
Capital . . . . .	50	32	1,094	282	2,847
Other—					
Current . . . . .	497	559	635	640	837
Capital . . . . .	18	76	112	113	137
Total expenditure on goods and services—					
Current . . . . .	8,853	10,802	14,267	17,775	21,365
Capital . . . . .	5,079	6,011	7,016	6,710	12,759
Total . . . . .	13,931	16,813	21,283	24,485	34,124
Grants to Australian National University—					
Current . . . . .	12,658	14,223	16,698	18,954	21,430
Capital . . . . .	5,062	5,316	5,570	5,500	4,326
Total . . . . .	17,720	19,539	22,268	24,454	25,756
Grants to Canberra College of Advanced Education—					
Current . . . . .	..	..	43	323	1,100
Capital . . . . .	..	25	439	940	1,400
Total . . . . .	..	25	482	1,263	2,500
Payments to the States(a)—					
Current—					
Research grants . . . . .	1,378	2,038	3,154	2,879	3,446
Universities . . . . .	31,551	34,262	39,912	43,534	50,435
Colleges of advanced education . . . . .	..	2,472	5,273	6,282	10,658
Independent schools . . . . .	..	..	..	..	12,177
Aboriginal advancement . . . . .	..	..	..	163	251
Total, current . . . . .	32,929	38,772	48,339	52,858	76,967
Capital—					
Universities . . . . .	15,227	16,354	16,329	19,097	17,234
Colleges of advanced education . . . . .	982	3,681	6,647	8,080	9,486
Technical . . . . .	6,230	9,894	13,877	7,587	9,878
Teacher education . . . . .	..	..	4,518	6,322	13,160
Secondary (science laboratories) . . . . .	9,635	10,163	12,587	11,762	12,898
School libraries . . . . .	..	..	..	1,703	7,540
Pre-school teachers colleges . . . . .	..	..	..	170	309
Aboriginal advancement . . . . .	..	..	..	681	636
Total, capital . . . . .	32,074	40,091	53,958	55,402	71,141
Total . . . . .	65,003	78,863	102,297	108,260	148,108
Cash benefits to persons—					
Commonwealth scholarship scheme—					
Post-graduate . . . . .	1,733	2,432	2,899	3,588	4,526
University . . . . .	10,064	13,890	13,383	16,268	18,160
Advanced education . . . . .	198	660	754	1,001	1,628
Technical . . . . .	600	816	1,031	1,123	1,162
Secondary . . . . .	5,197	6,243	6,474	6,558	6,738
Soldiers' children education scheme . . . . .	2,534	2,462	2,720	3,154	3,203
Other . . . . .	667	672	711	807	1,523
Total . . . . .	20,993	27,175	27,973	32,500	36,941
Grants towards private capital expenditure—					
Australian Capital Territory . . . . .	237	170	50	397	841
Northern Territory . . . . .	5	7	6	7	32
Australian National University—					
Affiliated colleges . . . . .	..	80	1,435	428	196
Total . . . . .	242	257	1,491	832	1,069
Overseas grants and contributions . . . . .	681	726	791	801	941
Grand total . . . . .	118,570	143,399	176,588	192,597	249,433

(a) Specifically for education.



The following paragraphs provide further details about the various items of expenditure in the foregoing table.

#### Department of Education and Science

Current expenditure shown under this heading in the above table relates mainly to salaries of departmental officers (\$3,301,000 in 1969-70) and other administrative expenses (\$990,000 in 1969-70). Some other items included refer to research and investigations into colleges of advanced education; special investigations by, and grants to, the Australian Council of Educational Research; Commonwealth support for the training of school librarians; curriculum development; assistance to the University of Sydney for the production of the Current Affairs Bulletin; departmental rentals, and repairs and maintenance. Capital expenditure relates mainly to furniture and fittings for departmental offices. Departmental activities are described on page 651.

#### Australian Universities Commission

Expenditure shown under this heading in the above table relates to salaries of officers (\$145,000 in 1969-70) and other administrative expenses (\$50,000 in 1969-70). For a brief description of the Commission's activities see page 652. For detailed information see the *Australian Universities Commission, Fourth Report, May 1969*.

#### Expenditure on education in the Territories

Expenditure by the Commonwealth Government on education in the Australian Capital Territory and the Northern Territory in 1969-70 is shown in the following table. For further information about education in the Territories see Chapter 29, The Territories of Australia.

### COMMONWEALTH GOVERNMENT EXPENDITURE ON EDUCATION AUSTRALIAN CAPITAL TERRITORY AND NORTHERN TERRITORY, 1969-70 (\$'000)

AUSTRALIAN CAPITAL TERRITORY	NORTHERN TERRITORY
Current expenditure—	Current expenditure—
Government schools and colleges—	Government schools—
Pre-schools . . . . . 326	Pre-schools . . . . . 204
Payment to New South Wales Department of Education . . . . . 5,374	Payments to South Australian Department of Education; and teacher moving expenses . . . . . 2,680
School transport(a) . . . . . 305	School transport . . . . . 203
Canberra Technical College . . . . . 746	Repairs and maintenance . . . . . 100
School of Music . . . . . 77	Other . . . . . 434
Repairs and maintenance . . . . . 208	Non-government schools—
Other . . . . . 768	Student allowances . . . . . ..
Non-government schools—	Other . . . . . 86
Student allowances . . . . . 389	
Assistance for buildings . . . . . 398	Total, current . . . . . 3,707
Total, current . . . . . 8,591	
Capital expenditure—	Capital expenditure—
Government schools and colleges—	Government schools—
Pre-schools . . . . . 200	New buildings and works . . . . . 2,820
Primary schools . . . . . 3,021	Plant and equipment . . . . . 127
Secondary schools . . . . . 2,491	Furniture and fittings . . . . . 32
Canberra Technical College . . . . . 64	Acquisitions . . . . . 7
Plant and equipment . . . . . 152	
Furniture and fittings . . . . . 262	Non-government schools—
Other building and related expenditure . . . . . 545	Approved capital programmes(b) . . . . . 32
Non-government schools—	Total, capital . . . . . 3,017
Approved capital programmes(b) . . . . . 841	
Total, capital . . . . . 7,576	Northern Territory Scholarships(c)(d) . . . . . 174
Secondary school bursaries and text book allowances (c)(d) . . . . . 95	
Total expenditure . . . . . 16,262	Total expenditure . . . . . 6,898

(a) Includes expenditure in respect of non-government schools not separately identifiable. (b) Included in 'grants towards private capital expenditure' in table on page 660. (c) Excludes Commonwealth Secondary and Technical Scholarships. (d) Included in 'cash benefits to persons' in the table on page 660.

**Other Commonwealth expenditure on goods and services**

Current expenditure shown under this heading in the table on page 660 relates to grants to the School of Tropical Health and Medicine, the Chair of Natural Philosophy at the University of Melbourne, the Lady Gowrie Child Centres, and the Australian Pre-School Association; capital expenditure relates to the grant to the School of Tropical Health and Medicine, for plant and equipment. Further information about the School of Tropical Health and Medicine and the Lady Gowrie Child Centres is given in Chapter 14, Public Health.

**Payments to the States specifically for education**

The next table shows payments to the States specifically for education, by function, for 1969-70. Further descriptive information is given in the paragraphs following this table.

**PAYMENTS BY THE COMMONWEALTH TO THE STATES SPECIFICALLY FOR  
EDUCATION, BY FUNCTION: EACH STATE, 1969-70**  
(\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>All States</i>
<b>Current—</b>							
Research grants . . . .	1,161	864	365	551	323	182	3,446
Universities . . . . .	20,218	13,960	6,508	4,964	3,281	1,504	50,435
Colleges of advanced education . . . .	834	4,837	1,300	1,361	1,929	397	10,658
Independent schools—per capita grants . . . . .	4,488	3,952	1,830	759	862	286	12,177
Aboriginal advancement . . . . .	102	65	70	10	..	4	251
<i>Total, current . . . . .</i>	<i>26,803</i>	<i>23,678</i>	<i>10,073</i>	<i>7,645</i>	<i>6,395</i>	<i>2,373</i>	<i>76,967</i>
<b>Capital—</b>							
Universities . . . . .	6,512	4,495	1,916	1,506	2,048	757	17,234
Colleges of advanced education . . . .	2,937	2,891	890	1,041	1,050	677	9,486
Technical training . . . . .	3,283	3,000	1,456	807	957	376	9,878
Teachers colleges . . . . .	6,037	3,250	1,401	2,021	201	250	13,160
Science laboratories—							
Government schools . . . . .	2,684	2,532	1,040	692	530	82	7,560
Independent schools . . . . .	1,979	1,505	778	510	391	174	5,337
Secondary school libraries . . . . .	2,136	2,225	1,816	627	596	140	7,540
Pre-school teachers colleges . . . . .	26	2	..	..	161	120	309
Aboriginal advancement . . . . .	48	..	345	80	160	3	636
<i>Total, capital . . . . .</i>	<i>25,641</i>	<i>19,900</i>	<i>9,642</i>	<i>7,285</i>	<i>6,094</i>	<i>2,579</i>	<i>71,141</i>
<b>Grand total . . . . .</b>	<b>52,444</b>	<b>43,578</b>	<b>19,715</b>	<b>14,930</b>	<b>12,489</b>	<b>4,952</b>	<b>148,108</b>

*Research grants.* The amounts shown represent payments by the Commonwealth to the States under the States Grants (Research) Acts. The payments are based on the recommendations of the Australian Research Grants Committee. In addition to the amounts shown, \$92,000 was made available to the Australian National University in 1969-70. A brief description of the history and activities of the Australian Research Grants Committee is given on page 652.

*Universities.* The amounts shown here represent payments by the Commonwealth under the Universities (Financial Assistance) Acts and the States Grants (Universities) Acts. The amounts paid are based on the recommendations of the Australian Universities Commission, *see* pages 652-4. Further detail of income and expenditure of universities is given on page 641. Commonwealth expenditure in relation to the Australian National University is shown in the table on page 660.

*Colleges of advanced education.* The Commonwealth provides financial assistance to the States for colleges of advanced education under the States Grants (Advanced Education) Acts. Payments to the States are based on the recommendations of the Commonwealth Advisory Committee on Advanced Education. An extra \$50,000 was provided in 1969-70 by the Commonwealth for research into advanced education. Commonwealth expenditure in relation to the Canberra College of Advanced Education is shown in the table on page 660. Further details of the activities of colleges and available Commonwealth grants are given in pages 641-3 and 654.

*Independent schools.* The *States Grants (Independent Schools) Act 1969* provides for financial assistance to schools that are not dependent on State finances. The assistance commenced with the 1970 school year. For details of per capita grants to independent schools see page 655.

*Technical training.* The *States Grants (Technical Training) Act 1968* provides for financial assistance to the States for buildings and equipment for use in technical training in institutions conducted by a State or an institution which is declared by the regulations to be an institution in relation to which the Act applies. The Act provides for assistance for a further three years commencing 1 July 1971, with grants totalling \$36 million for that period.

*Teachers colleges.* Under the *States Grants (Teachers Colleges) Act 1970* the Commonwealth provides financial assistance to the States for approved building projects in connection with teachers colleges. A maximum of \$30 million is available during the three years ending June 1973. For further details of teachers colleges and teacher education, see pages 643-6.

*Science laboratories.* The amounts shown under this heading in the above table represent payments under the *States Grants (Science Laboratories) Act 1968* which provides for financial assistance to States for science laboratories and equipment in State and independent schools. For further details of this assistance, see page 655.

*Secondary school libraries.* The *States Grants (Secondary Schools Libraries) Act 1968* provides for grants totalling \$27 million to be paid to the States over the three years ending December 1971, by way of financial assistance for secondary school libraries in State and independent schools. See page 656 for further details. There were no payments in 1968-69 in respect of independent schools. In addition, the Commonwealth has sponsored special training courses, organised by the States, for school librarians, principals, subject masters, educational administrators and representatives of the teacher training departments of universities and colleges of advanced education and lecturers and principals from teacher training colleges. Expenditure in connection with these courses during the period 1968-69 to 1970-71 totalled approximately \$101,000.

*Pre-school teachers colleges.* Under the *States Grants (Pre-school Teachers Colleges) Act 1968*, the Commonwealth provides financial assistance to the States for building projects. Payments not exceeding \$2.5 million in aggregate may be authorised under the Act during the period December 1968 to December 1972.

#### Cash benefits to persons.

The distribution of cash benefits, on a State basis, is shown in the following table.

**CASH BENEFITS TO PERSONS: STATES, 1969-70**  
((\$'000)

	N.S.W.(a)	Vic.	Qld	S.A.(a)	W.A.	Tas.	Aust.
<b>Commonwealth Scholarship Scheme—</b>							
Post-graduate . . . . .	2,011	1,142	523	525	228	97	4,526
University . . . . .	6,186	5,350	2,836	1,910	1,323	555	18,160
Advanced education . . . . .	386	562	370	153	114	43	1,628
Technical . . . . .	421	365	140	128	75	33	1,162
Secondary . . . . .	2,556	1,909	954	624	505	187	(b)6,738
Soldiers' Children Education Scheme . . . . .	1,180	848	556	292	175	141	(c)3,203
Other(d) . . . . .	..	..	..	..	..	..	1,523
<b>Total . . . . .</b>	<b>12,740</b>	<b>10,176</b>	<b>5,379</b>	<b>3,632</b>	<b>2,420</b>	<b>1,056</b>	<b>36,941</b>

(a) Totals for New South Wales and South Australia include unallocable expenditure on cash benefits to persons resident in the Australian Capital Territory and the Northern Territory respectively. (b) Includes \$3,000 paid to Australians abroad. (c) Includes \$11,000 paid to Australians abroad. (d) Not allocable by State.

Under 'other' in the table above are the following items: Forestry scholarships (\$66,000), C.S.I.R.O. research studentships (\$360,000), scholarships and allowances to students in the Australian Capital Territory (special university scholarships, \$64,000, secondary school bursaries, \$2,000; textbook allowances, \$93,000) and special scholarships to students in the Northern Territory (\$174,000), Aboriginal Study grants (\$190,000), Aboriginal Secondary grants (\$522,000) and Australian Agricultural Council scholarships (\$52,000). Further details of these schemes are given on page 657.



A brief description of each type of Commonwealth scholarship is given on page 656. Detailed information is available in the annual reports of the Commonwealth Scholarships Board. For additional information about the Soldiers' Children Education Scheme, see Chapter 5, Repatriation, and the annual reports of the Soldiers' Children Education Boards.

#### Grants towards private capital expenditure.

This item represents amounts paid to independent schools in the Australian Capital Territory (\$841,000) and the Northern Territory (\$32,000) for approved capital programmes; and grants to affiliated residential colleges at the Australian National University (\$196,000).

#### Overseas grants and contributions.

This item represents expenditure in connection with the Commonwealth Educational Co-operation Scheme. Details of Australia's participation in this scheme are given on pages 651-2.

### State expenditure on education

The following table shows, for the six States, expenditure on education classified into current expenditure and capital expenditure. Figures of current expenditure are based on an analysis which has been made for special use by the Commonwealth Grants Commission. In this analysis the purpose has been to show a comparison of State expenditure from the Consolidated Revenue Funds and certain special funds for the headings of education expenditure shown. Expenditures from Commonwealth grants for specific current educational purposes have been excluded. Other items excluded are expenditure on payroll tax and superannuation as suitable dissections are not available. The Capital expenditure figures are limited to gross expenditure on educational buildings from the loan funds. This also excludes expenditure from Commonwealth capital grants for educational purposes and expenditure on buildings from certain special funds.

The totals of the table do not agree exactly with the totals which can be derived from the table on page 658. The overall analysis for National Accounts purposes, on which the table on page 658 is based, was originally in a very summary form and did not take account of some of the detail available in the Commonwealth Grants Commission work. The system is being developed into a more complete system of public finance statistics with the object of providing a more detailed classification and a reconciliation between the two analyses. Although comparisons of expenditure between the States are only approximate due to differences in organisation and accounting practices, for the present this table represents the most detailed breakdown available which is reasonably comparable between States. The figures relate to the year ended 30 June 1970 and expenditure per head of population relates total expenditure to the mean population.

#### STATE AUTHORITIES: ESTIMATED EXPENDITURE ON CERTAIN EDUCATIONAL ACTIVITIES, 1969-70 (\$'000)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>All States</i>
Current expenditure—							
Administrative and general (education departments and schools) . . . . .	10,329	3,394	3,204	2,270	1,677	689	21,563
Transportation of school children and students . . . . .	14,545	8,602	4,006	1,653	3,547	1,894	34,247
Training of teachers . . . . .	15,776	23,366	5,430	7,422	4,608	2,099	58,701
Primary . . . . .	100,975	77,695	37,130	26,668	26,382	8,951	277,801
Secondary . . . . .	88,477	54,773	27,785	23,825	17,918	9,922	222,700
Universities . . . . .	29,540	19,062	8,159	7,349	4,599	2,187	70,896
Technical education . . . . .	20,942	42,505	5,276	4,801	7,993	1,457	82,974
Agricultural and forestry education . . . . .	1,965	804	1,248	226	53	8	4,304
<i>Total, current expenditure . . . . .</i>	<i>282,549</i>	<i>230,201</i>	<i>92,238</i>	<i>74,214</i>	<i>66,777</i>	<i>27,207</i>	<i>773,186</i>
Capital expenditure . . . . .	55,784	45,616	14,185	15,500	13,775	7,450	152,310
<i>Total expenditure . . . . .</i>	<i>338,333</i>	<i>275,817</i>	<i>106,423</i>	<i>89,714</i>	<i>80,552</i>	<i>34,657</i>	<i>925,496</i>
<i>Per head(a) (\$). . . . .</i>	<i>74.70</i>	<i>80.66</i>	<i>59.60</i>	<i>77.67</i>	<i>83.46</i>	<i>88.68</i>	<i>75.58</i>

(a) Of mean population in each State.



**ESTIMATED EXPENDITURE ON CERTAIN EDUCATIONAL ACTIVITIES, ALL STATES  
1965-66 TO 1969-70  
(\$'000)**

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>Current expenditure—</b>					
Administrative and general (education departments and schools) . . . .	13,057	14,969	15,577	16,930	21,563
Transportation of school children and students . . . . .	22,219	25,305	28,397	31,619	34,247
Training of teachers . . . . .	33,762	37,237	41,475	48,600	58,701
Primary . . . . .	182,312	196,722	216,631	242,418	277,801
Secondary . . . . .	128,857	147,578	169,840	192,843	222,700
Universities . . . . .	44,034	47,898	53,038	61,239	70,896
Technical education . . . . .	45,080	50,122	57,533	66,800	82,974
Agricultural and forestry education . .	2,795	3,439	3,858	4,219	4,304
<i>Total, current expenditure . . . .</i>	<i>472,116</i>	<i>523,270</i>	<i>586,349</i>	<i>664,668</i>	<i>773,186</i>
<b>Capital expenditure . . . . .</b>	<b>113,072</b>	<b>119,138</b>	<b>121,253</b>	<b>141,991</b>	<b>152,310</b>
<b>Total expenditure . . . . .</b>	<b>585,188</b>	<b>642,408</b>	<b>707,602</b>	<b>806,659</b>	<b>925,496</b>
<b>Per head(a) (\$) . . . . .</b>	<b>51.55</b>	<b>55.61</b>	<b>60.19</b>	<b>67.29</b>	<b>75.58</b>

(a) Of mean population in the States.

## CULTURAL ACTIVITIES

### Libraries

The Munn-Pitt report of 1935 greatly stimulated interest in libraries and librarianship throughout Australia. This is evidenced by the development of libraries, the passing of legislation in all States to increase library services, and the establishment in 1937 of the Australian Institute of Librarians to improve the standard of librarianship. This body was reconstituted in 1949 as the Library Association of Australia and incorporated by Royal Charter in 1963, and its functions now include the promotion and improvement of libraries and library services. The Association conducts annual examinations in librarianship for which courses of instruction are available in all States and the Australian Capital Territory.

An account of the establishment, growth and functions of the National, Commonwealth, and State libraries is given on pages 533-538 of Year Book No. 55.

#### Commonwealth libraries

*National Library of Australia, Canberra.* The Library comprehensively collects and preserves Australian books, periodicals, newspapers, government publications, pictures, prints, manuscripts, maps, moving picture films, and sound recordings. It is assisted in this by the deposit provisions of the *Copyright Act* 1968 and has also been enriched by the acquisition of such notable collections as the Petherick collection of 16,500 items in 1911, the Cook manuscripts in 1923, the Cumpston collection on Public Health in Australia in 1936, the Mathews ornithological collection in 1940, the Nan Kivell collection of 16,000 items of Australian and Pacific interest including original paintings, prints, manuscripts, and printed material in 1959, and the Ferguson collection of Australiana, acquired in 1970. The Library maintains a permanent exhibition of paintings, prints, and other historical material selected from its various collections.

In association with the Library of New South Wales, the Library copies on microfilm overseas important unique material relating to Australia.

*Australian National Bibliography*, which appears weekly, monthly and annually, lists books published in Australia and books dealing wholly or substantially with an Australian subject or written by Australian authors. Associated with this compilation the Library provides a catalogue card service to libraries and others wishing to use its catalogue cards for Australian books. The publications of Australian governments, included in *Australian National Bibliography*, are also listed

annually in *Australian Government Publications* and a subject list of serials is published each year under the title *Current Australian Serials*. The Library's principal activity in subject bibliography is its *Australian Public Affairs Information Service*, published monthly since 1945, with annual cumulations since 1955.

Co-operative bibliographical activity includes recording, in a series of union catalogues, the holdings of the major Australian libraries. The national union catalogue of monographs was commenced in 1960, since when all the larger and an increasing number of the smaller libraries have reported their monograph accessions to the National Library. The major published union catalogue is the loose leaf, continually revised *Serials in Australian Libraries, Social Sciences and Humanities*, which complements another catalogue, *Scientific Serials in Australian Libraries* published by the Commonwealth Scientific and Industrial Research Organization. The Library operates the Australian Medical Literature Analysis and Retrieval System (MEDLARS) service.

The National Library acts as a central library of documentary and educational films, its film collection containing approximately 8,000 titles, together with Australian historical films. It published *Australian Films: a Catalogue of Scientific, Educational and Cultural Films, 1940-58* in 1959 and annual supplements in succeeding years.

The National Library's collections contain over 1,250,000 volumes, 21,000 paintings, pictures and prints, 82,000 photographs, 45,000 reels of microfilm, 2,800 running feet of manuscripts, 60,000 motion picture stills, 18,000 reels of moving picture films, 220,000 maps, and 500,000 aerial photographs.

*Patent Office Library.* The Library of the Commonwealth Patent Office, Canberra, contains approximately 15,500 books and a wide variety of periodicals and other literature relating to pure and applied science, industrial technology and the industrial property (patent, trade mark, design and copyright) laws and practice of most countries. Patent specifications of inventions are received from the principal countries of the world; present holdings are over 11,500,000. Indexes include a microfilm of a classified index to 3,000,000 U.S.A. patents and translations of abstracts of U.S.S.R. patents.

*Commonwealth Scientific and Industrial Research Organization.* The library holdings of the Organization cover the pure and applied sciences. In addition to the Central Library and Information Services located in East Melbourne, each of the Divisions has specialised collections covering such subjects as food research, building research, soil research, chemistry, physics, animal health, and fisheries. The Central Library maintains a union catalogue of the holdings of all CSIRO libraries.

*The Australian War Memorial Library.* In the War Memorial library are housed the documentary and pictorial records of Australia's fighting services in wars in which they have participated. The printed records section contains over 70,000 volumes, a large collection of military maps, newscuttings and newspapers, sound recordings, war posters, and postage stamps. The collection of official war photographs covering the 1914-18, 1939-45 and Korean Wars numbers over 250,000, and a collection of official motion picture film depicts Australia at war. Adequate facilities exist for public research and requests for information are met where practicable.

*The Commonwealth Parliamentary Library.* The Library provides a special type of service designed to meet the needs of Parliament. The Legislative Research Service prepares briefs covering the history of a subject, background information, summary of viewpoints and arguments, and the compilation and interpretation of statistical information. The Legislative Reference Service answers questions and provides information on any subject, mainly from books, government documents, Hansard reports, periodical articles, and newspapers. The Library collection is concentrated on topical material, supported by a wide collection of standard references; it totals 25,000 titles, including 8,000 serial titles. The Library publishes the *Parliamentary Handbook* which is a standard reference work, a series of periodical abstracting bulletins, occasional annotated reading lists and a fortnightly accessions list.

*Other Commonwealth Government libraries.* Most Commonwealth authorities have specialised collections in their own fields and in addition draw largely on the National Library.

*Library services in the Territories.* The Northern Territory Library Service maintains five centres in the Territory. At 30 June 1970 stocks totalled 70,167 volumes which were held at the following centres: Darwin, 31,451; Nightcliff, 8,915; Alice Springs, 18,588; Tennant Creek, 5,956; Katherine, 5,257. The National Library, through its Extension Services Section, conducts the Canberra Public Library Service to residents of the Australian Capital Territory, to whom 1,107,405 loans were made in 1969-70. At 30 June 1970, 294,971 volumes were held, 173,041 at adult libraries, and 121,930 at children's libraries.

### State libraries

*New South Wales.* At 30 June 1970, 185 councils had established libraries in terms of the Library Act, 1939–1969. During 1969–70 they spent on their libraries \$6,227,391 including \$1,791,861 received in subsidy. There are 255 libraries, of which 90 are in the metropolitan area and 165 in the country. There are also 24 bookmobiles, of which one is in Sydney, 10 in the suburbs of Sydney, and 13 in country municipalities and shires. These libraries contain 4,304,418 volumes. The State Library provides a central cataloguing service for municipal and shire libraries constituted under the Act.

Under the Library of New South Wales Act, 1969, the former Public Library of New South Wales became the Library of New South Wales. It includes a General Reference Department of 608,238 volumes, a Circulation Department, together with the Shakespeare Tercentenary Memorial Library, and the Mitchell and Dixon Libraries and Galleries which are mainly devoted to Australian and Pacific material. The Circulation Department lends books to municipal and shire libraries and to individual borrowers. The total stock of the Department is 76,332 volumes, and 38,352 books were lent to public libraries and individual borrowers during 1969–70. In 1970 there were 254,213 volumes in the Mitchell Library, in addition to manuscripts, maps and other material. The total number of volumes in the Library of New South Wales now exceeds 977,315 apart from manuscripts, historical pictures, and other material. The library maintains an adult education section servicing adult education activities for the Universities of Sydney and New England and the Workers' Educational Association.

Other important libraries in New South Wales are: Teachers Colleges, 357,566 volumes; the City of Sydney Public Library, 224,844; Department of Technical Education, 314,978; Railway Institute, 169,110; Parliamentary Library, 139,500; Australian Museum, 38,000; Government Transport Institute, 24,794; New South Wales Teachers' Federation Library, 26,000; Workers' Educational Association, 15,500; and the Library at the National Herbarium, over 10,000 volumes.

*Victoria.* During 1970–71, 169 Councils shared Government library grants amounting to \$1,623,749. Of this amount, \$1,495,749 was direct municipal library subsidy. With the addition of expenditure from these Councils' own funds the total expenditure on municipal library services for 1970–71 was nearly \$4,609,000. In 1969–70, 941,000 borrowers used the free library services, now totalling 3,000,513 books, to the extent of 16,387,884 issues.

Particularly in the country, service has been developed by means of regional libraries. These services, of which there are 26 at present, comprising a total of 108 councils, consist of groups of councils which pool their resources, book-stocks and trained staff. The Victorian Government provides an Establishment and Regional Library Development Grant of \$100,000 per annum.

There are 14 bookmobile services operating in Victoria, 11 in country regions and 3 in the metropolitan area.

The collections of the State Library of Victoria total about 1,080,000 items. Of these, the La Trobe collection consists of 50,000 volumes as well as many pictures, manuscripts and old newspapers. The State Library receives 7,300 periodicals, annuals and newspapers. The Library also administers the State Archives, which comprise 50,000 shelf feet of records.

*Queensland.* The holdings of the Public Library of Queensland and its extension services in 1969–70 were: main reference collection, 222,552 volumes and 13,846 maps and pamphlets; Country Extension Service, 92,047; Oxley Memorial Library, 27,771 volumes and 45,081 maps, pamphlets and miscellaneous items.

Local authorities are empowered by the Libraries Act to establish and conduct library services as a function of local government. In 1969–70, 83 local authorities were conducting 152 library services. The Brisbane City Council has established 21 of these libraries, also a mobile library to serve eight outlying suburban areas, and a bookmobile which takes books to incapacitated people. There were 126 libraries in Queensland free to adults. To help overcome the problems of a large area and sparse population, various local authorities have established 4 regional library services with headquarters at Charleville, Barcaldine, Mount Isa and Emerald, respectively. During 1969–70 the State Government provided a grant of \$802,519 from consolidated revenue to finance the activities of the Public Library, to pay subsidies to local bodies conducting free library services, and for the acquisition or improvement of library buildings and equipment and to pay lesser subsidies on books, equipment and maintenance to local bodies conducting subscription libraries. Subsidies were paid to 4 regional library service boards, 77 local authorities and 32 other bodies.

At 30 June 1970 the Parliamentary Library of Queensland contained about 100,000 volumes and pamphlets.



*South Australia.* The Reference Department of the State Library of South Australia contains 268,889 volumes and receives about 2,600 periodical titles. There are 53,687 volumes in the Adelaide Lending Service. The Country Lending Service has 437,250 volumes. The Adelaide Lending Service lent 308,261 books in 1969-70, and the Country Lending Service, 157,130.

The library of the Parliament of South Australia held approximately 65,000 volumes in 1970.

There are 31 local public libraries in South Australia provided by 22 local government and other authorities. The libraries are subsidised on a \$1 for \$1 basis by the State Government. The Libraries Board of South Australia, through the State Library of South Australia, provides various central services. Book-stocks are pooled in the State Library of South Australia and are interchanged between the libraries.

At the end of June 1970 these local public libraries contained 280,595 books. There were 139,458 registered borrowers. During 1969-70, 2,072,581 books were lent.

*Western Australia.* The Library Board of Western Australia administers the State Reference Library and the Central Music Library, and provides all books and related services to 126 local public libraries throughout the State. Its stocks at 30 June 1970 were 1,010,769 volumes, comprising circulation stock (including books in public libraries), 703,203 volumes, State Reference Library, 290,660 bound volumes and Central Music Library, 4,175 books on music and 12,731 scores.

*Tasmania.* The Tasmanian Library Board administers the State Library in Hobart, the extension of library services throughout the State and State aid to libraries. State Government expenditure on library services in 1969-70 was \$650,495. A regional library operates in 5 north-western municipalities, with headquarters in Burnie, smaller libraries in other large towns and a bookmobile in rural areas. A second regional library, with headquarters in Launceston, opened on 1 July 1971. Fourteen southern municipalities are served by 2 bookmobiles based in Hobart and a bookmobile serves schools in the metropolitan area. At 30 June 1970 the State Library in Hobart held 135,188 reference volumes and 106,579 lending volumes. It loaned 402,304 books to municipal libraries during 1969-70.

### University libraries

A description of libraries in Australian universities appears on pages 539-41 of Year Book No. 55. The following table shows the number of books and pamphlets held, accessions during the year, and expenditure on libraries for each university. For further information, see annual mimeograph publication *University Statistics—Part 2: Staff and Libraries* (reference No. 13.8).

UNIVERSITY LIBRARIES

University	Books and pamphlets (a)	Accessions during year (b)	Expenditure (c)
	'000	'000	\$'000
Sydney . . . . .	1,296	76	1,336
New South Wales . . . . .	560	42	984
New England . . . . .	274	11	296
Newcastle . . . . .	158	16	279
Macquarie . . . . .	242	42	506
Melbourne . . . . .	564	30	1,061
Monash . . . . .	383	58	1,312
La Trobe . . . . .	110	11	572
Queensland . . . . .	658	49	1,151
Adelaide . . . . .	525	29	720
Flinders . . . . .	152	20	339
Western Australia . . . . .	384	29	554
Tasmania . . . . .	210	20	335
Australian National . . . . .	505	41	930
<b>Total . . . . .</b>	<b>6,021</b>	<b>474</b>	<b>10,375</b>
(a) 30 June 1970. 31 December 1969.			
(b) Year ended 30 June 1970.			
(c) During year ended			

### Children's libraries and school libraries

For details of Commonwealth grants for the development of secondary school library services, see page 656 of this chapter.



*New South Wales.* Children's libraries are being developed as departments of municipal and shire libraries. The Education Department maintains a school library service for the fostering of State school libraries, which are maintained partly by parents and citizens associations and partly by departmental subsidy. Secondary and central schools, and an increasing number of primary schools, have teacher librarians.

*Victoria.* The Education Department provides for the building of libraries in secondary and technical schools, and new primary schools with 10 or more classrooms. A subsidy of up to \$9,000 is available to other primary schools for library buildings. Library furniture is provided, establishment grants are given to new schools for the purchase of books, and the Government provides an annual per capita grant to all schools. At June 1970, 416 primary, 249 secondary, and 88 technical schools had central libraries.

*Queensland.* In Queensland, 147 libraries are free to children. The Brisbane City Council conducts 21 of these, also a mobile library to serve eight outlying suburbs. Country children may borrow from the Country Extension Service which has a separate children's collection. The purchase of books for State school libraries in Queensland is financed by school committees and parents associations, with a \$1 for \$1 subsidy from the Department of Education.

*South Australia.* A children's library of 40,756 volumes is used by school classes and individual children living in the metropolitan area. In 1969–70, 202,506 books were lent. A lending service for young people from thirteen to eighteen years of age has a stock of 16,132 volumes, and in 1969–70, 85,692 loans were recorded.

*Western Australia.* The Education Department provides library services, issues books and gives library allocations for library resources purchased by schools. All government high schools are provided with library accommodation and furniture and their libraries are staffed by school librarians according to the size of the school. New high schools are issued with books to a value of \$1,500 in each of their first three years and all high schools receive an annual issue of books and an allocation for book purchases. New primary schools are issued with books to the value of \$400 in their first year. All government and non-government schools with post-junior students receive an annual issue of books for matriculation studies. A number of primary schools have organised school libraries in rooms available, or in premises provided by the parents and citizens associations. Annual issues of books are made to all primary schools, varying according to the size of the school, and assistance is provided for the purchase of library books. The Charles Hadley Travelling Library provides 500 boxes of books which are circulated to all small schools, mission schools, and special classes. Children who are unable to attend school are provided with books from the Correspondence School's library.

*Tasmania.* All the State's municipal libraries have Lady Clark Memorial Children's Libraries. The Lady Clark Memorial Children's Library in the State Library in Hobart has 24,163 books and serves schools in the Hobart Metropolitan area by bookmobile. More than 150 schools which are not close to a municipal library have collections of books on loan from the Lady Clark Memorial Children's Library, which has a stock of 193,850 books. Libraries have been built up in most schools, with Education Department subsidies matching local funds to levels determined by the size of the school. A new Central Library Service Branch offers bibliographic and technical advice on school library development.

## Archives

General interest in archives in Australia was aroused in 1888, when the Colony of New South Wales celebrated its centenary, the occasion being marked by official publication in 1889–1894 of the *History of New South Wales from the Records* by G. B. Barton and A. Britton, and in 1893–1898 of the series of *Historical Records of New South Wales*, edited by A. Britton and F. M. Bladen. Both publications were based on transcripts of documents in London which had been made by Mr James Bonwick, appointed Archivist by the Government of New South Wales in 1884.

In 1902 Mr F. M. Bladen presented to the Commonwealth Government a report on European Archives, in which he recommended the establishment of a Commonwealth Archives Office and the copying of further official records in London. The copying project continued and some of its results were embodied in the volumes of *Historical Records of Australia*, published by the Commonwealth in 1914–1925, under the editorship of Dr J. F. Watson.

Measures for the preservation and storage of original documents were not taken until later years. In the absence of duly constituted archives offices, the various major libraries throughout Australia undertook the collection of historical records, both from official and private sources. An archives Department of the Public Library of South Australia was established in 1920, and other institutions formed archives branches in, 1944 (Commonwealth National Library), 1945 (Public Library of Western Australia), 1948 (State Library of Victoria), 1949 (State Library of Tasmania), 1953 (Public Library of New South Wales), and 1959 (State Library of Queensland). Legislation to govern arrangements for official records was passed as follows: South Australia (1925, 1936), Tasmania (1943, 1965), Queensland (1943) and New South Wales (1960). Since 1961, separate authorities for official archives have been established: Commonwealth Archives Office, 1961; Archives Office of New South Wales, 1961; Archives Office of Tasmania, 1965. A Business Archives Council was established in 1954 to co-ordinate activities in the field of company records and a number of firms have established their own archives services. Certain churches have also provided appropriate facilities for ecclesiastical records. Other corporate and private archives continue to be collected by several archives offices, libraries and, more recently, universities.

#### **Commonwealth Archives Office**

An account of the development of the Commonwealth Archives Office and a detailed description of its functions appear on pages 543-4 of Year Book No. 55. The Archives Office functions as a central agency for the control of records created by the Commonwealth Government which are no longer required in the day-to-day business of government. At 30 June 1970 the total holdings of the Archives Office throughout Australia amounted to 440,000 shelf feet of records, including 154,000 feet of permanent material, such as files, manuscripts, registers, cards, books, maps, plans, models, paintings, films, photographs, microfilms, recordings and tapes. The Office regulates access to all Commonwealth records, whether in its custody or held by departments, under rules which came into force on 1 January 1971. With certain exceptions, Commonwealth records which are 30 years old or more are available as 'open' to public access. In addition, to facilitate study on the World War II period, accelerated release of records originating between 1 January 1941 and 31 December 1945 is allowed where they are required for the preparation of important works of scholarship. The Office provides an advisory service to inquirers, both official and public, on appropriate sources of information for particular topics including material held by the Office itself, by other Commonwealth agencies and elsewhere. During 1969-70 some 323,000 items were lent to departments. The Office carries out searches for departments and provides information from the records in its custody. Some 13,000 requests for these services were received in 1969-70. In accordance with the Commonwealth Government's access rules, the Office also supplies information to members of the public engaged in academic or other forms of research. Records may be consulted by holders of a search ticket and 157 public search tickets are currently valid. During 1969-70 inquiries were received from 318 researchers. There were 7,200 daily visits to archives search rooms and repositories by officials and the public, and 26,000 items were produced for consultation.

The headquarters of the Commonwealth Archives Office is in Canberra, and there are branches in Sydney, Melbourne, Brisbane, Adelaide and Perth. In 1970 records surveys were conducted in the Northern Territory, Papua and New Guinea and Norfolk Island. The Office maintains liaison with similar organisations in overseas countries and is a national member of the International Council on Archives, established under the auspices of UNESCO.

#### **Archives Office of New South Wales**

The Archives Authority of New South Wales is a statutory corporation established under the Archives Act 1960 and has custody and control of the State archives. These are preserved in the Archives Office of New South Wales.

The Act requires that before any public records of the State are destroyed or disposed of, notice must be given to the Archives Authority which may then require any such records to be made available to it. Records transferred to the Authority become State archives and when 35 years old are generally open to holders of a reader's ticket.

The State archives at 31 December 1970 occupied 32,670 feet of shelving. This excludes more than 16,000 maps and plans besides other records which cannot be readily measured. In addition there were about 100,000 feet of permanently valuable records housed mainly in the Government Records Repository.

### Archives Office of Tasmania

The Archives Office of Tasmania operates under the *Archives Act* 1965, No. 47. The statutory authority under the Act is the Tasmanian Library Board. No records of state and local authorities may be destroyed or otherwise disposed of except on the written authority of the Principal Archivist. The holdings of the Archives Office amount to about 12,000 shelf feet (including non-public records).

Three parts of a Guide to the Public Records of Tasmania have been published and five further record groups are being inventoried for publication. A file lending service is conducted for the benefit of departments and authorities which have deposited semi-current records in the Archives Office. Research workers have access to records in the search room and a mail reference service is provided for country and interstate inquirers. A panel of private researchers is available who hire their services to inquirers who wish to undertake prolonged search of documents.

### Australian National University Archives

The Australian National University Archives was established in 1954 when the records of the Australian Agricultural Company were acquired, and in 1959 its collecting activities were expanded to include records of employee organisations. The University now holds a collection of the records of businesses (approximately 110 accessions) and of trade unions (approximately 170 accessions). The aim is to gather primary source material to support advanced research within the University in economic history, history, and political science. Detailed arrangement and description are undertaken and close liaison is maintained with scholars in the Research School of Social Sciences to keep the collecting policy abreast of trends in research. Scholars from other universities are also helped, and reference work is carried out to answer inquiries. The University Archives include deposits which have been microfilmed and pamphlet collections of interest to research workers in political history.

### Business Archives Council of Australia

The Business Archives Council of Australia works for the preservation of business records and promotes the writing of business history. The Council itself does not collect business records. The main collecting centres are the Archives of the Australian National University, the University of New England and University of Melbourne. The University of New England concentrates on rural industries. The Australian National University and the University of Melbourne have large collections on a wide range of business activity, and are notable for records of Trade Unions and mining companies respectively.

## Museums and art galleries

In 1964 an annual collection of statistics on a uniform basis was commenced from Australian museums and art galleries. The following paragraphs provide summarised results of the collection.

A museum or art gallery is considered to be a building, group of buildings or parts of buildings, managed as a unit and intended predominantly for the permanent display of objects of interest (museum) or objects of art (art galleries) to the general public. Institutions displaying live exhibits are excluded (the more important of these are mentioned on pages 672-3), as are buildings used for temporary displays (exhibitions, commercial galleries exhibiting only for sale) without a permanent stock of exhibits; permanent exhibitions which are ancillary to other activities such as exhibits at council chambers, libraries, hotels, and other commercial enterprises providing services to tourists and sightseers; collections which are not readily accessible to the general public, such as university collections for the use of students and research workers; and historic homes, etc., not specifically intended for the permanent display of objects of interest (i.e. where the building itself and its normal fittings are essentially on display).

### Museums and art galleries, 1970

The following table classifies by States and Territories and by ownership the institutions in Australia which have been identified in 1970 as museums and art galleries (branches of museums and art galleries are not shown separately).



**MUSEUMS AND ART GALLERIES: STATES AND A.C.T., AND OWNERSHIP, 1970**  
(Number)

	Major institutions			Other institutions			All institutions
	Museums	Art galleries	Mixed institutions	Museums	Art galleries	Mixed institutions	
<b>State or Territory—</b>							
New South Wales . . . .	3	1	..	4	3	2	13
Victoria . . . . .	2	1	..	3	5	2	13
Queensland . . . . .	1	1	..	..	3	..	5
South Australia . . . . .	1	1	..	7	2	..	11
Western Australia . . . . .	1	1	..	3	1	..	6
Tasmania . . . . .	..	..	2	..	..	..	2
Northern Territory . . . . .	..	..	..	..	..	..	..
Australian Capital Territory . . . . .	1	..	1	1	..	..	3
<b>Ownership—</b>							
Commonwealth Government . . . . .	1	..	1	..	..	..	2
State Governments . . . . .	8	5	1	3	..	1	18
Municipal authorities . . . . .	..	..	1	6	6	1	14
Private trusts . . . . .	..	..	..	3	6	1	10
Universities . . . . .	..	..	..	1	1	1	3
Private . . . . .	..	..	..	5	1	..	6
<b>Total museums and art galleries . . . . .</b>	<b>9</b>	<b>5</b>	<b>3</b>	<b>18</b>	<b>14</b>	<b>4</b>	<b>53</b>

Some descriptive detail in respect of the major institutions is given on pages 547 to 549 of Year Book No. 55.

### Botanical and zoological gardens

In addition to the zoological gardens referred to in the following paragraphs there are numerous privately owned zoos and sanctuaries, many of them at tourist resorts, which maintain collections of Australian flora and fauna. There are also various national parks, forests, reserves, etc., dedicated for public use, which are preserved largely in their natural condition.

#### New South Wales

The Sydney Botanic Gardens are situated on the shores of Farm Cove, Sydney Harbour. They occupy sixty-six acres and contain a large collection of flowering plants, shrubs and trees as well as hothouses of orchids and ferns.

The Zoological Gardens at Taronga Park, on the northern side of Sydney Harbour, occupy about seventy acres and contain an aquarium. In 1969–70 admissions to the grounds were 903,289. The receipts of the zoological department of the Taronga Park Trust amounted to \$723,509 in 1969–70 and expenditure was \$603,469. Exhibits at 30 June 1970 comprised 895 mammals, 3,082 birds, 374 reptiles, 29 amphibians and 874 fish.

#### Victoria

The main botanical gardens in the State are the Royal Botanic Gardens, an area of eighty-eight acres within one mile of the centre of the City of Melbourne, containing over 12,000 species of plants, of which there are some 30,000 individual specimens. Many species of native birds breed on islands in lakes within the gardens.

The Zoological Gardens in Royal Park contain a wide selection of animals, birds and reptiles. A wild life sanctuary is also maintained at Healesville.

#### Queensland

Botanical gardens have been established in Brisbane and in several other cities. The Brisbane Botanic Gardens occupy approximately forty-six acres on the banks of the Brisbane River in the central city area and are noted for their collections of palms, tropical trees and shrubs, and succulents; they contain over 7,500 species.

Initial development has started on a new Botanic Gardens in the foothills of Mount Coot-tha, about three miles from central Brisbane. The area being developed is approximately 200 acres.



### South Australia

The Botanic Garden covers forty-five acres and contains collections of Australian and exotic plants from low rainfall and sub-tropical regions. In glasshouses are collections of tropical, ornamental and economic plants. Special collections include cacti and succulents, bromeliads, and begonias. An up-to-date and comprehensive botanical and horticultural library is maintained.

Mount Lofty Botanic Garden, of approximately 180 acres, was established in 1960 and is expected to be opened to the public by the mid-1970s.

The State Herbarium was established in 1952 and moved to the present building in 1965. It contains about 250,000 specimens.

The Zoological Gardens, opened in 1883, have an area of approximately 19 acres, and contain a fine collection of animals, reptiles, and birds.

### Western Australia

A botanic garden and arboretum for the native plants of Western Australia is in King's Park, a reserve of almost 1,000 acres close to the centre of Perth. The West Australian collections at present comprise a total of 1,200 species of trees and wildflowers. Virtually all trees native to the southern half of the State, with the exception of some rare mallees, are represented in the arboretum.

Regular field work is undertaken to collect material and carry out botanical exploration. Seed of native plants collected is distributed to botanical institutions throughout the world and to private growers and nurserymen. An annual seed list offers from 900 to 1,000 species. About 8,000 packets of seed are distributed each year.

Research on propagation of native plants is carried on in the nursery and information acquired is passed on to growers through State branches of the Society for Growing Australian Plants and its journal. Facilities are provided for the employment and ancillary training of students enrolled in the three-year course of the Western Australian Certificate of Horticulture and Park Administration.

The Zoological Gardens at South Perth have an area of 44 acres and are under the control of the Zoological Gardens Board. Animals, birds and reptiles are exhibited. During the year 1969-70, 207,108 adults and 179,772 children paid for admission into the zoo and in addition, 3,735 disadvantaged children and adults were admitted free.

### Tasmania

The Royal Tasmanian Botanical Gardens adjoining Government House on the Queen's Domain contain a fine collection of exotic trees and shrubs and a small aviary.

There are three main privately owned wildlife sanctuaries and zoos, each with a few exotic animals, at Granton near Hobart, at Punch Bowl near Launceston and at Westbury, 20 miles from Launceston. The Launceston City Council keeps a small collection of animals and birds at City Park.

### Northern Territory

The Darwin Botanical Gardens occupy seventy-four acres and feature thirty acres of tropical plants of both native and overseas origin. They are controlled by the Darwin City Council.

### Australian Capital Territory

The Canberra Botanic Gardens on the lower slopes of Black Mountain have been under development since 1950. The gardens are on a 100-acre site and are being developed for the study of the botany, propagation, and cultivation of Australian native plants. The gardens were opened for public inspection in 1967 and were officially opened in 1970.

The Tidbinbilla Nature Reserve covers 11,500 acres of the Upper Tidbinbilla Valley, about 25 miles from Canberra. Approval for its establishment was given in 1964. It is designed to conserve the indigenous plant and animal communities and to enable the public to see the fauna in their natural habitats. Though still in the early stages of development, the reserve attracts many visitors.

## Book publishing

Statistics of book publishing in Australia and the External Territories are prepared from data supplied by the National Library of Australia, which receives copies of all books and pamphlets published in Australia and the External Territories, although not necessarily in the year of publication.

The method of counting conforms with international practice. Each title is counted as one unit. The statistics cover all non-periodical publications published in Australia. They refer to publications of five pages or more and include pamphlets, new translations, and re-editions. They include govern-

ment publications, educational textbooks, published university theses, etc., but exclude publications not available to the general public, advertising material, publications of transitory interest, musical works, and maps and charts.

#### Number of publications received

The following table shows the number of publications received by the National Library in 1970 by subject classification and publisher. Trade publishers are those organisations set up predominantly for publishing, whose title output is significant and widely available throughout the bookselling trade. In the table, marginal publishers, commercial, are firms for whom publishing is subsidiary to their main function. Comparative figures are given for receipts from 1966 to 1969.

**AUSTRALIAN PUBLICATIONS RECEIVED BY THE NATIONAL LIBRARY IN 1970: SUBJECT GROUP AND PUBLISHER**

	<i>Books</i>	<i>Pamphlets</i>	<i>Total</i>
<b>Subject group—</b>			
Bibliography, libraries, general . . . . .	62	94	156
Philosophy, psychology . . . . .	13	11	24
Religion, theology . . . . .	68	71	139
Social sciences . . . . .	582	902	1,484
Linguistics, philology . . . . .	68	27	95
Science . . . . .	221	284	505
Technology, business . . . . .	399	817	1,216
Art, amusement . . . . .	151	168	319
<b>Literature—</b>			
History of literature, literary criticism, anthologies, school editions . . . . .	17	6	23
Australian literature . . . . .	271	63	334
Other literature . . . . .	106	14	120
Geography, travel . . . . .	99	83	182
History, biography . . . . .	158	114	272
<i>All publications</i> . . . . .	<i>2,215</i>	<i>2,654</i>	<i>4,869</i>
<b>Publisher—</b>			
Government . . . . .	377	1,467	1,844
Trade . . . . .	1,285	298	1,583
<b>Marginal—</b>			
Commercial . . . . .	58	86	144
Societies and institutions . . . . .	439	739	1,178
Private individuals . . . . .	56	64	120
<i>Total</i> . . . . .	<i>2,215</i>	<i>2,654</i>	<i>4,869</i>
<b>Annual receipts—</b>			
1969 . . . . .	1,890	1,986	3,876
1968 . . . . .	1,711	1,689	3,400
1967 . . . . .	1,601	1,769	3,370
1966(a) . . . . .	n.a.	n.a.	3,026

(a) Includes a small number of books and pamphlets published in Australia's External Territories.

#### Commonwealth Literary Fund

The Commonwealth Literary Fund assists the development of Australian literature and promotes a greater awareness of that literature. The Fund awards fellowships each year to enable selected writers to devote themselves full-time to literary projects; such fellowships have a maximum value of \$6,000 each a year. Assistance is given to publishers for the publication of manuscripts considered to be of high literary merit and through State adult education authorities for programmes of lectures on Australian literature. The Fund also provides financial support to Australian literary magazines and operates a scheme of pensions for Australian writers of national stature.

The Fund is administered by a Committee of three parliamentarians, traditionally under the Chairmanship of the Prime Minister, on the advice of an Advisory Board expert in literary matters.

#### Commonwealth assistance to Australian composers

The Advisory Board, Commonwealth Assistance to Australian Composers, was established in 1967 to advise the Government on financial support for the composition of music in Australia and on the promotion of the work of Australian composers in Australia and abroad; the Advisory

Board is the responsible Commonwealth body in all matters relating to these areas. The Advisory Board's activities in connection with direct assistance to composers include full-time and part-time fellowships for composing music, the value of a full-time fellowship being \$6,000 a year; short-term aid to composers to enable them to complete compositions for performance; assistance for the commissioning of works by Australian composers; and programmes for student-composers to gain advanced practical training in the techniques of composition.

In the matter of promoting the work of Australian composers the Advisory Board offers assistance for the publishing of music, the copying of scores, and the copying of parts of scores for performance; assistance towards the costs of recording Australian compositions; and assistance through State Adult Education authorities for lecture/recitals aimed at developing interest in Australian music at the community level. The Advisory Board is active also in a number of other ways in the areas of national and international promotion of Australian music.

## Film production

### Australian National Film Board

The Australian National Film Board advises the Minister for the Interior on matters concerned with the production, acquisition and distribution of films required by Commonwealth departments for use within Australia on important matters of national interest and welfare, such as school and adult education, rehabilitation, social development, international understanding, trade and tourist expansion, and immigration; and for dissemination abroad to expand trade and commerce with other countries, to encourage tourist traffic with Australia, to improve Australia's relations with other countries and, where necessary, to explain Australia's national policies, and to encourage immigration.

The Board has twelve members with the Secretary of the Department of the Interior as chairman, and the remainder representative of Commonwealth departments, State government instrumentalities, and other interested organisations.

### Commonwealth Film Unit

The Film Division of the News and Information Bureau, Department of the Interior, is the official film production and distribution agency for Commonwealth departments and instrumentalities. It is referred to as the Australian Commonwealth Film Unit. It distributes theatrical and television Film Unit productions in Australia and overseas through its representatives at Australian official posts. Non-theatrical distribution in Australia is arranged in co-operation with State film distribution agencies, and through the National Library of Australia.

The Film Unit produces films for general exhibition, as well as training and special purpose films. In 1970-71 the Film Unit produced approximately 110 reels of new films and 150 reels of foreign versions of existing films. While many films are released commercially abroad, the emphasis is on distribution of educational and information films through non-theatrical circuits. Selected films have been recorded in most Asian and European languages and in Esperanto and Pidgin.

In addition to films made on its own initiative, the Commonwealth Film Unit produces films under the sponsorship of, or with the co-operation of, Commonwealth departments and other government instrumentalities. It participates in cultural events such as those surrounding Expo '70 in Japan.

### Australian Film Development Corporation

The *Australian Film Development Corporation Act 1970* provided for the establishment of an Australian Film Development Corporation to administer a fund with an initial capital of \$1 million. The Corporation will make loans to film and television producers and will guarantee repayment of loans made to producers of Australian films.

## Censorship

### National Literature Board of Review

The National Literature Board of Review was established in 1968, following Commonwealth-State agreement, to achieve uniformity in the administration of laws relating to blasphemous, indecent or obscene publications of *prima facie* literary, artistic or scientific merit. In terms of the agreement the Board is established under the Customs (National Literature Board of Review) Regulations. Appropriate Ministers of any State may, under the Agreement, refer works published or distributed locally to the Board for advice. Subject to retention of final responsibility by each Minister it is the intention of the Governments concerned not to act against a publication of merit which the Board advises is suitable for distribution in Australia.



### Film censorship

The Commonwealth Government's powers over censorship of films under the Customs Act extend only to imported films and imported advertising matter. Under that Act the Customs (Cinematograph Films) Regulations provide for the appointment of a Film Censorship Board whose function is to ensure that films and related advertising material coming within certain defined categories are not admitted into Australia. The Film Censorship Board may pass films in their original form, reject them, or pass them after eliminations have been made. Legislation passed by the State Governments of Victoria, Queensland, Western Australia, and Tasmania names the Commonwealth Film Censorship Board as the censorship authority and vests in it the power to classify films as suitable for general exhibition or not. The State Acts give the Commonwealth Board the authority to censor films made in Australia for commercial exhibition and advertising.

The censorship organisation comprises a Censorship Board of seven persons and a Cinematograph Films Board of Review, the headquarters being in Sydney. Importers have a right of appeal to the Minister against decisions of the Board and the Board of Review.

*Thirty-five mm films for exhibition in picture theatres.* In 1970, 1,564 films comprising approximately six million feet, were censored. This represented approximately 1,103 hours screening time. Of these films, 564 originated in the United Kingdom, 323 in the United States of America and 677 in other countries. Principal suppliers among the last mentioned were: Italy (85), Greece (72), USSR (59), France and Japan (47 each), India (22), and Sweden and Holland (14 each). Included in these figures were 594 full-length feature films which constitute the main theatrical attractions. Feature films came from the United States of America (167), the United Kingdom (88), Italy (73), Greece (46), France (36), USSR (34), Japan (25), Czechoslovakia (12), Sweden (11), Yugoslavia (9). Forty-five feature films were rejected and cuts were made from 136. There were 46 appeals; 27 against rejection, 10 against proposed eliminations and 9 against rejection of advertising matter. Ten appeals were allowed and 36 disallowed.

Feature films classified as suitable for general exhibition numbered 165, and 384 were considered not suitable for children. Of the latter, 155 carried the special condition that all advertising should indicate that they were suitable only for adults. These classifications are advisory only and are designed to enable picturegoers, particularly parents, to obtain a general idea of the nature of any particular film. In addition to these imported films, 122 thirty-five mm films of 108,918 feet produced in Australia were cleared. These were mainly newsreels and documentaries intended for commercial exhibition or export.

*Sixteen mm films.* Excluding those imported for television use, 5,282 sixteen mm films of approximately 4.5 million feet were examined. These were films commercially produced for screening in theatres used by business undertakings for advertising and instructional purposes, and for screening in churches, schools and universities. They also included a number of 16 mm theatrical features, some having been previously imported in 35 mm. One was rejected.

*Eight and 9.5 mm films.* Approximately 212,000 feet of 8 mm and 9.5 mm films were examined. Eighty-six films with an approximate footage of 9,900 feet were rejected.

*Television films.* In 1970, 9,311 films for use on television, predominantly 16 mm, of approximately 12.5 million feet, were censored. The number of films in not a true indication of volume because many were of short duration and because these figures include a number of videotapes converted to their 16 mm cine film equivalents. In terms of screening time, the films and tapes censored for television amounted to approximately 5,848 hours. On a footage basis the United States of America supplied 66 per cent of the total imports and the United Kingdom 28 per cent. Thirty-two television films were rejected outright and an additional 45 were classified as unsuitable for televising. Eliminations were made from 571. There were no appeals.

*Foreign language films.* Countries other than Australia, the United Kingdom and the United States of America supplied 555 of the 35 mm foreign language films imported for theatrical exhibition, of which 335 were feature films. Generally, the dialogue is in a foreign language with explanatory English captions. A few have an English commentary and in some cases English dubbed dialogue. Of 5,282 sixteen mm films censored, 1,066 originated from non-English speaking countries. The chief supplying countries were Germany (265), France (188), Japan (187), Italy (133), Poland (41), Holland (37), Sweden (34), USSR (17), Switzerland (15) and Yugoslavia (12).

## Cultural organisations

### Australian Council for the Arts

The Australian Council for the Arts commenced operation in 1968 as the Commonwealth Government's adviser on financial support for the arts and on policies for their development throughout Australia. The Council provides basic support for State drama companies, national touring companies



such as the Australian Ballet and the Australian Opera, regional organisations such as the West Australian Ballet and the Queensland Opera Company, and the three federal co-ordinating and entrepreneurial organisations—the Australian Elizabethan Theatre Trust, Arts Council of Australia and Musica Viva. The National Institute of Dramatic Art and the Australian Ballet School are largely supported by the Australian Council.

In addition to grants which are given on an annual basis, a number of programmes have been set up from which assistance is given throughout the year, and applications for assistance are invited through regular advertising in the national press. A training programme helps to train theatre personnel as well as artists, a research programme examines the needs of the arts and suggests new areas for assistance, and an international programme enables Australians to have the opportunity of seeing overseas companies and Australian companies to travel overseas. In addition a development fund assists a wide variety of projects throughout Australia in the fields of drama, Aboriginal arts, music, festivals, film and television, youth and education as well as assisting Australians engaged in the performing arts to spend a period abroad for additional training. A special projects fund enables new areas of assistance to be developed, for example craft programmes and community programmes, as well as assisting multi-media and environmental work.

#### **Australian Ballet Foundation**

The Australian Ballet Foundation was formed in 1961 by the Australian Elizabethan Theatre Trust and J. C. Williamson Theatres Ltd to establish a national ballet company, which gave its first performance on 2 November 1962.

The establishment of a permanent Australian company, the appearance of the world's leading artists with the company, the commissioning of works by Australian composers, choreographers and designers and presentation of the company overseas were achieved within the first three years.

The Foundation receives subsidies from the Federal Government (through the Australian Council for the Arts), the seven State Governments and the major municipal bodies (through the Australian Elizabethan Theatre Trust). It also receives support from private corporations and individuals.

The Australian Ballet has its headquarters and studios in Melbourne. The company's school has an annual intake of 20 students, selected by national audition, who undertake a full-time course in ballet and the allied arts. Students receive scholarships and these are made available through government subsidy and by private donors.

#### **Australian Opera**

The Australian Opera was created in 1956 under the auspices of The Australian Elizabethan Theatre Trust to form the basis of a national touring opera company. It was known as The Elizabethan Trust Opera Company until the end of 1969 when The Australian Opera formed its own Board of Directors. In its early years the company retained only a core of full-time administrative officers and engaged its singers for each annual season. These seasons involved the presentation of three operas in most years and a tour circuit covering each State of the Commonwealth. In addition small country touring companies travelled through New South Wales, Queensland, Victoria and South Australia. Since 1967 the company has permanently employed a chorus nucleus and several principal singers. It currently employs a chorus of thirty-six singers, and thirty-one principal singers on a permanent basis and a total administrative, technical and music staff of thirty people. It uses on a year-round basis one of the two orchestras maintained by The Australian Elizabethan Theatre Trust.

In 1971 The Australian Opera will give 227 capital city performances (eleven different productions) and a touring company will present 'The Marriage of Figaro' in some 48 country centres in the four States.

The Australian Opera receives Government grants through the Australian Elizabethan Theatre Trust and the Australian Council for the Arts.

#### **Australian Elizabethan Theatre Trust**

The Australian Elizabethan Theatre Trust, originally formed to present drama, opera, ballet and puppetry throughout Australia, has accorded full autonomy to most of the performing companies established by the Trust in its earlier years. The Marionette Theatre of Australia continues to operate under Trust administration. The Trust's major functions now are to supply certain financial guarantees to the independent performing companies; to maintain two orchestras to service the requirements of the Australian Opera and the Australian Ballet; to administer the complex subscription booking systems on which both of these companies now operate; to maintain a Production Division executing costume and scenery designs; and to act as entrepreneur in the touring of theatre features from overseas and Australian sources.

The Trust receives annual grants from the Commonwealth Government, the State Governments, and some capital city councils and its revenue is supplemented by subscriptions from members and donations from business houses.

### **Arts Council of Australia**

The Arts Council of Australia has divisions (and more than 140 branches) in all States and the mainland Territories. A Federal Secretariat was opened in Canberra in 1969 but will move to Sydney towards the end of 1971.

The Arts Council and the Divisions receive funds from the Australian Council for the Arts. The Divisions also receive State Government grants in New South Wales, Victoria, Queensland and South Australia. Some activities of the Council are supported financially by non-metropolitan local government bodies. The New South Wales Division is represented on the Adult Education Advisory Board in that State, and on the Music Committee of UNESCO. The Tasmanian Division is represented on, and works closely with, the Adult Education Board of that State.

The Arts Council works to bring the arts from overseas and local sources to country centres and metropolitan and country schools, and is also concerned with taking the arts to children. Tours by high standard companies in opera, ballet, drama, puppets, etc., operate throughout the year. The Arts Council works closely with the Australian Ballet, the Australian Opera and regional companies in organising country tours for these bodies.

The Council handles a wide range of art exhibitions in city and country areas. Summer schools and other courses for drama, painting, pottery, music, and other arts are an established feature of the work of the New South Wales and Queensland Divisions, as are weekend schools of drama, music, painting and pottery.

Yearly drama festivals are conducted. The New South Wales Division sponsors biennial arts festivals in Sydney (North Side Arts Festival), with the fifth festival being planned for August 1973. The Queensland Division of the Arts Council organises an annual School of the Arts.

School tours are organised in New South Wales and Queensland.

### **Australian National Trusts**

The Australian National Trusts were founded to further the preservation of lands, places, buildings, works, and articles which are of national importance by reason of educational, aesthetic, historic, architectural, artistic, scientific, cultural, or other special interest.

The first Australian National Trust, the National Trust of Australia (New South Wales), was formed in 1945. Since then National Trusts have been formed in each of the other States. The Trusts in New South Wales, Queensland, South Australia, and Western Australia have statutory authority, and those in Victoria and Tasmania are incorporated under the Companies Act of their respective States. The Australian Council of National Trusts was incorporated in 1965 to co-ordinate the activities of the State National Trusts and represent them at the federal level and internationally.

Membership of the National Trusts is open to all individuals and organisations. Total membership throughout the Commonwealth is approximately 30,000. The Trusts are financed by members' subscriptions and donations from individuals and commercial and industrial organisations, the proceeds of charges for entry to Trust properties and the fund-raising activities of members, including inspections of historic houses. In some States the Trusts are subsidised by the State Governments.

The number of properties owned or controlled by the Trusts exceeds sixty. These include houses, natural reserves, a powder magazine, a police station, a gaol, two paddle steamers and a hulk, a joss house, and a garden. The Trusts have also established a register of buildings (totalling several thousand) which they consider should be preserved in the national interest because of their historical and or architectural significance.

### **Historic Memorials Committee**

The Historic Memorials Committee was established in 1911 for the purpose of securing portraits of distinguished Australians who had taken an active part in Federation. Later the Committee decided to obtain portraits of all Governors-General, Prime Ministers, Presidents of the Senate, Speakers of the House of Representatives, and other notable Australians. In addition the Committee has commissioned paintings recording special events connected with the Commonwealth Parliament.

The Committee comprises the Prime Minister (Chairman), the President of the Senate, the Speaker of the House of Representatives, the Vice-President of the Executive Council, the Leader of the Opposition, and the Leader of the Opposition in the Senate. The Art Advisory Board, *see* below, assists the Committee by advising on portraits to be commissioned.

### **Commonwealth Art Advisory Board**

The Commonwealth Art Advisory Board is the Government's adviser on all matters pertaining to the visual arts, including the commissioning of portraits by the Historic Memorials Committee. The Board is also responsible for the purchase of works of art for the National Collection which embraces historical and contemporary Australian works, contemporary art on a world-wide basis, and the art of indigenous peoples of the Pacific Basin. The National Collection will ultimately be housed in the proposed Australian National Gallery which is to be built in Canberra.

On behalf of the Government, the Board organises and finances exhibitions of Australian art in overseas countries and contributes towards the cost of exhibitions from overseas which visit Australia under the patronage of State Art Galleries.

## **SCIENTIFIC AND INDUSTRIAL RESEARCH IN AUSTRALIA**

### **Background**

Scientific research in Australia increased considerably with the outbreak of the 1939-45 War and research activities continued to expand in the period of rapid post-war economic growth. Prior to 1939 Australia's research effort had been oriented towards the biological sciences, but under the stimulus of military requirements, this effort spread to the physical sciences and to problems of industrial technology. Research in the medical and social sciences also increased. With the overall research expansion a growing number of government agencies, both Commonwealth and State, university departments and industrial organisations established scientific programmes related to their various areas of interest and responsibility.

Much of the present day research effort is directed towards the development of natural resources and of primary and secondary industries. For information about research in the rural industry and the mineral industry, *see* Chapters 23 and 27 respectively. There is also considerable research effort in the medical sciences, space sciences, environmental sciences, social sciences, and in atomic energy.

### **Commonwealth Government**

The Commonwealth Government has played a key role in the war time and post-war development of the national scientific effort through programmes of research and related scientific activities in its own establishments and in funding scientific activities generally.

Over thirty Commonwealth Government agencies are engaged in research and scientific activities having a wide range of interest including development of natural resources and of primary and secondary industries; health; communications and transport; atomic energy; defence. Details of these activities are contained in annual reports of the individual agencies. A brief description of the research activities of the Department of Supply is given in Chapter 4, Defence.

Through its own agencies the Commonwealth Government engages in extensive research in the area of defence science. Research programmes are undertaken to meet Australia's defence needs and to fulfil agreed commitments under international arrangements. Australia has co-operated with allied nations in scientific projects of defence significance, particularly where such projects add to technological development in Australia.

### **Commonwealth Scientific and Industrial Research Organization**

The Commonwealth Scientific and Industrial Research Organization (CSIRO) is Australia's largest civil scientific body and now has a staff of about 6,400 including some 2,000 professional scientists. Its main function is to carry out scientific research for the primary and secondary industries of the Commonwealth and its Territories. It does not conduct defence research, medical research or atomic energy research. The other powers and functions of CSIRO as defined in the Science and Industry Research Act of 1949, include:

- training of scientific research workers and the awarding of scientific research studentships and fellowships;
- making of grants in aid of pure scientific research;
- recognition or establishment of associations of persons engaged in any industry, for the purposes of carrying out industrial scientific research and the co-operation with, and the making of grants to, such organisations;
- testing and standardisation of scientific apparatus and instruments and the carrying out of scientific investigation connected with standardisation;
- collection and dissemination of information relating to scientific and technical matters; and
- publication of scientific and technical reports, periodicals and papers.



CSIRO is a statutory corporation operating under its own Act of Parliament and exercising its powers subject to the regulations and the approval of the Minister for Education and Science.

The governing body of the Organization is the Executive, which is located in Canberra and consists of nine members appointed by the Governor-General. There are five full-time members, one of whom is chairman, and four part-time members. At least five of the members must possess scientific qualifications. The Executive is responsible to the Minister for the policy and the work of the Organization.

CSIRO has thirty-three Divisions, each working in some particular area of research such as animal health, tropical pastures or textile physics. Since the Organization's activities are Commonwealth-wide and often involve extensive field work, a number of branch laboratories and field stations have been established in various parts of Australia. The Head Office is in Canberra and Regional Administrative Offices are located at Brisbane, Canberra, Melbourne, and Sydney. The Organization also has an Australian Scientific Liaison Officer in London and Scientific Counsellors in Washington and Tokyo.

The Organization's total budget for 1970-71 was about \$65,000,000. Nearly four-fifths of this was provided directly by the Commonwealth Government, the remainder being contributed by primary industry, individual companies, Australian and overseas government instrumentalities and private foundations.

#### **Australian Atomic Energy Commission**

The Australian Atomic Energy Commission is a statutory corporation which functions under the direction of the Minister for National Development. It consists of five members. The Commission is responsible for undertaking and encouraging the search for and mining of uranium and is empowered to co-operate with the appropriate authorities of the States in connection with these and related matters. It is authorised to develop the practical uses of atomic energy by constructing and operating plant for this purpose, carrying out research, and generally fostering the advancement of atomic energy technology. A detailed description of its activities is contained on pages 560-562 of Year Book No. 55.

#### **Nuclear Power**

In October 1969 the Commonwealth Government announced a proposal to build a nuclear power station of 500 megawatt capacity at Jervis Bay, on the New South Wales south coast, by 1975, subject to a satisfactory tender. This followed discussions early in 1969 between the Commonwealth and all State Governments. However, in June 1971 the Government decided to defer the decision for twelve months.

If the project is undertaken it will be in collaboration with the Government of New South Wales and its Electricity Commission. The station will be financed and owned by the Commonwealth, and the power supplied to the State electricity network. New South Wales would be asked to guarantee the long-term power requirements of the Australian Capital Territory. The Commonwealth would supply the fuel and retain the spent fuel.

A detailed programme of environmental surveys, including meteorology, tides, currents and marine life, has been undertaken to ensure that the power station will cause the minimum of disturbance to the environment.

#### **Associated training and research organisations**

The Australian Institute of Nuclear Science and Engineering comprises the Australian Atomic Energy Commission and Australian universities. The Institute's operations are financed by membership subscriptions and a Commonwealth Government grant which amounted to \$200,000 in 1969-70. The purpose of the Institute is to stimulate research and training in nuclear science and engineering within the universities and to arrange access for university research workers to the highly specialised equipment at the A.A.E.C. Research Establishment.

The Australian School of Nuclear Technology is jointly sponsored by the Commission and the University of New South Wales. Courses are being offered in nuclear technology, production and use of radioisotopes, radiological safety, health physics, and other related topics.



## State Governments

Scientific programmes of the six State governments are directed mainly towards agriculture, fisheries, forestry, public health, water supply and power generation, engineering and construction, and areas of the social sciences. These research programmes are generally of an applied nature and are related directly to the various responsibilities of the departments and instrumentality concerned. State Government research programmes extend to such fields as physical and mental health, child welfare, vocational guidance, etc., and represent an important contribution to Australia's overall research effort.

## Universities

Most research in the universities is of a fundamental character, although some university departments are also concerned with applied research directed to the solution of practical problems. The fifteen universities in Australia are engaged in an extensive and diverse range of research programmes in the physical, life and social sciences. The post-war growth of university research has been accompanied by rapid development of post-graduate studies which, prior to the late 1950s, were undertaken mainly overseas.

Details of the courses offered in Australian universities together with background information on their teaching and research programmes, and a comprehensive summary of general university development in recent years are given in Year Book Number 55, 1969 pages 507-9. The reader should also refer to the handbooks and calendars published by each university.

## Industry

An increasing amount of research and development is being undertaken by Australian industries. Firms with major research programmes are mainly in the chemical, pharmaceutical, electronic, sugar, paper, mining and steel industries. Several industries have established research institutes or associations.

### Productivity promotion

Two complementary organisations—the productivity group movement and the Productivity Promotion Council of Australia are concerned with distinct areas of productivity promotion. Executive and administrative services for them are provided by the Department of Labour and National Service.

*Productivity Group Movement.* The role of productivity groups is to improve the productivity performance of individual member undertakings. Groups were first formed in New South Wales and Victoria in 1957 and were later established in all States. At 31 July 1971, there were 205 groups comprising 4,189 member undertakings throughout the nation.

A group consists of about twenty members whose representatives meet regularly to engage in the exchange of practical ideas and experiences and seek improvement in the effectiveness of members' operations. There are three main types of productivity groups: mixed industry groups which bring together knowledge and experience from a wide variety of fields; single industry groups whose members are in the one industry (for example, printing, transport, timber); and professional type groups comprising people such as production engineers and personnel managers.

In each State there is a Productivity Group Advisory Council which is a forum for the exchange of ideas among the groups and seeks to serve their common interests. At the national level there is a Productivity Groups National Committee on which each State Council is represented. This Committee publishes *Quest*, a quarterly news magazine for groups, arranges productivity group publications and films, and develops national themes and group expansion programmes.

*Productivity Promotion Council of Australia.* The complementary body is the Productivity Promotion Council of Australia which was inaugurated in September, 1969. It is concerned with community education in productivity, stimulation of senior management's interest in productivity promotion, and collaboration with other professional bodies in arranging joint activities on factors affecting productivity. It is also committed to help the expansion of the productivity group movement.

Membership of the Council is drawn from organisations, business concerns, government and semi-government bodies and individuals. Finance is provided by members' subscriptions on a sliding scale based on type and size of undertakings.

The Council operates through a National Committee, State Branch Committees and Standing Advisory Panels. The National Committee is composed of nominees from major national employer and employee associations, Commonwealth government departments and a number of individual experts. Branch committees have been established in New South Wales, Victoria, Queensland and South Australia.

### Other Research (including joint projects)

#### Antarctic Research

Australia has participated in scientific research in the Antarctic region since 1911 through the Antarctic Division of the Department of Supply and now maintains permanent bases at Mawson, Davis and Casey on the Antarctic continent and one on Macquarie Island. Scientists from Government agencies and universities are engaged in continuing research programmes relating to many aspects of the Antarctic environment.

#### Space Projects

Australian participation in scientific projects making use of artificial earth satellites began with facilities established as a contribution to the programme of the International Geophysical Year (1957-58).

Deep-space tracking stations constructed and operated at a number of sites in Australia through joint arrangements with the United States have played an important role in the United States's manned space flight programmes.

#### Astronomy

One of Australia's significant contributions to scientific endeavour at the international level has been in the fields of optical and radio astronomy. Largely by expertise in these areas Australia plays a significant role in international space research. Programmes in optical astronomy have been in progress for many years. However, the growth of radio astronomy has occurred mainly since the 1939-45 War.

*Mount Stromlo and Siding Spring Observatories.* Mount Stromlo Observatory and Siding Spring Observatory are the two astronomical research stations of the Research School of Physical Sciences, Australian National University. The staff of the observatories are academic staff of the University's Institute of Advanced Studies. The permanent headquarters of the observatories are located at Mount Stromlo, together with the library, laboratories and offices of the scientific staff. The older telescopes are located on Mount Stromlo, the newer ones on Siding Spring Mountain. At Siding Spring there is a lodge to house the astronomers, permanently based at Mount Stromlo, who visit for short periods to make observations there.

The observatories constitute the principal centre of optical astronomical research in the southern hemisphere. Their research facilities are second only to the great observatories of the south-western United States, and because of their latitude observations can be made on parts of the sky permanently inaccessible to northern astronomers. The functions of the observatories are to carry out original investigations (both observational and theoretical) in astronomy and astrophysics, and to provide post-graduate training for future Australian astronomers.

The direction of the research conducted depends on the steadily widening interests of the staff and scholars as the subject of astronomy itself rapidly progresses. Areas of permanent interest to which the observatories have made important contributions include the evolution of stars and of stellar systems, the study of the Magellanic clouds and their globular star clusters, the chemical composition of the stars and the study of pulsating stars. The results of the work carried out at the observatories are published in international scientific periodicals, principally in the *Monthly Notices of the Royal Astronomical Society* and the *Astrophysical Journal*.

Mount Stromlo Observatory is situated at 35° 19' 16" south latitude and 149° east longitude at an altitude of 2,560 feet. It is on the summit of a ridge of low hills in the Australian Capital Territory seven miles west of the city of Canberra. The first regular scientific work was started at this site in 1925, and the Observatory was incorporated in the Australian National University in 1957. The main instruments are 30-inch, 50-inch and 74-inch reflecting telescopes and associated spectrographs, photometers and spectral scanners.

Siding Spring Observatory was established in 1965. It is located at 31° 16' south latitude and 148° 41' east longitude at an altitude of 3,820 feet and occupies the summit of Siding Spring Mountain in the Warrumbungle Ranges, near Coonabarabran, New South Wales. This site has one of the best climates for astronomical research to be found anywhere in Australia—considerably better than that at Mount Stromlo.

Early in 1967, the United Kingdom and the Australian Government agreed to collaborate in the construction and operation of a 150-inch optical telescope to be located at Siding Springs (New South Wales). The new instrument, when completed, will be one of the two largest optical telescopes in the Southern Hemisphere and will be exceeded in size by only one telescope in existence at the present time, the 200-inch instrument at Palomar, California. The new optical telescope will play an important part in complementing the work of the existing 210 feet radio telescope located at Parkes (New South Wales).

#### Agreement with United States

In the fields of civil science a formal agreement with the United States relating to scientific and technical co-operation was signed in October 1968. This agreement was to broaden and expand already existing co-operation between the Australian and American civilian scientific communities by providing additional channels for scientific collaboration in the civil field between the two countries. Since the signing of the agreement, co-operative research activities have been arranged in a number of fields including atmospheric sciences, arid lands research, problems of drug dependence, photo-synthesis and biomedical research.

### Funding of Scientific Research in Australia

A substantial proportion of the Commonwealth Government's overall financial support for research in Australia is devoted to research carried out within the Commonwealth's own agencies. In addition, the Commonwealth Government has established a number of fund granting schemes to promote research which is carried out in other sectors of the economy.

For example, support for research in the natural and social sciences and in the humanities is provided through the *Australian Research Grants Committee* which was established in 1965. The majority of the research supported under this scheme is carried out in the universities. Funds for allocation by the Committee are \$13.25 million for the 1970-72 triennium.

For over 30 years Commonwealth moneys have been allocated by the *National Health and Medical Research Council* for the support of medical research.

To encourage industrial research and development in Australia the Government introduced the *Industrial Research and Development Grants Act 1967*. The legislation, administered by the *Australian Industrial Research and Development Grants Board*, provides for the payment of grants to Australian manufacturing and mining companies for increased research and development expenditure.

Companies employing professional research staff are assisted in their own research and development, but the Act also provides for companies to contract research and development with approved research organisations.

The first grants to industry under this Act were made in 1968 and the Government provided \$17 million for this purpose in 1970-71. Special taxation concessions also apply to expenditure on research and development.

The Commonwealth Government also contributes to *Research Trust Funds* which obtain portion of their revenue from levies on production by particular industries. Allocations are made from these trust funds for research in the meat, wheat, rural, dairy, sugar, fisheries, tobacco and minerals industries.

### Scientific societies

#### Royal Societies

The following table contains the latest available statistical information about the Royal Societies in each State and in the Australian Capital Territory.

ROYAL SOCIETIES, DECEMBER 1970

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.
Year of charter . . .	1866	1859	1884	1880	1913	1844	1930
Number of members . .	346	597	275	300	248	552	143
Volumes of transactions issued(a) . . .	103	84	81	94	59	104	..
Number of books in library	35,945	33,500	73,038	26,000	8,060	37,600	..
Societies on exchange list .	395	336	301	368	247	320	..

(a) Cumulative total



### **Australian Academy of Science**

The Australian Academy of Science is the national institution representing science in Australia. Constituted by Royal Charter in 1954, the Academy promotes scientific knowledge and research, maintains standards of scientific endeavour and achievement in the natural sciences in Australia, and recognises outstanding contributions to the advancement of science. The Academy represents Australian science and scientists at the national and international level, co-ordinates Australian contributions to international co-operative scientific ventures, organises meetings of scientists, holds symposia, and arranges for visits of scientists from other countries to Australia. It also administers research fellowships provided by industry.

Its Fellows (designated F.A.A.) are eminent in some branch of the physical or biological sciences in Australia, occupying professional positions in universities, the Commonwealth Scientific and Industrial Research Organization, other research organisations, and industry. A few places are reserved for Fellows who have rendered conspicuous service in the cause of science. No more than nine new Fellows are elected in any one year. Its present membership is 144 Fellows.

The Academy is financed by general purpose grants from the Commonwealth Government and considerable private benefactions. In 1970-71 the Academy received from the Government \$115,000, including \$55,300 for the International Biological Programme. The Academy is managed by an elected council comprising a president, treasurer, three secretaries and ten ordinary members who are drawn equally from the physical sciences and biological sciences. Chief administrative officer is the Executive Secretary, who is not a Fellow. Its conference centre and principal offices are in Canberra.

### **Australian and New Zealand Association for the Advancement of Science (ANZAAS)**

This Association was founded in 1887. Its objects are 'the advancement of science and scholarship through the communication of knowledge and the promotion of a spirit of co-operation among scientific workers, scholars and those in sympathy with science and scholarship generally, especially in Australia, New Zealand and the Australian Territories'. The 44th ANZAAS Congress will be held in Sydney on 14 to 18 August 1972, and the 45th Congress will be held in Perth, 13 to 17 August 1973.

The ANZAAS Central Office is in Sydney and Divisions operate in New South Wales, Victoria, South Australia, Western Australia, Port Moresby and New Zealand.

### **Other scientific societies**

The Linnean Society of New South Wales, with headquarters in Sydney, was founded in 1874 for 'the cultivation and study of the science of natural history in all its branches'. The Society publishes proceedings, maintains a library, and offers research fellowships. Ninety-five volumes of proceedings have been issued and the library has some 50,000 volumes. The Linnean Macleay Fellowship for research in natural history is offered annually to graduates of the University of Sydney who are members of the Society and resident in New South Wales. The membership at the end of 1970 was 301.

The British Astronomical Society has a branch in Sydney and there are more than 200 other learned societies devoted to the study of particular sciences. Some of these, including the Royal Australian Chemical Institute and the Institution of Engineers, Australia, are qualifying bodies, admission to which is by qualification only. Others, such as the Institute of Food Technologists, are open to any interested person. Some societies, such as the Australian Biochemical Society, have annual symposia of a very high standard. A great many of these bodies publish appropriate journals.

The Australian Academy of the Humanities is concerned with the advancement of scholarship and of interest in an understanding of Language, Literature, History, Philosophy and the Fine Arts.

The Academy of the Social Sciences in Australia encourages the advancement of the social sciences in Australia and acts as the Australian member of international non-governmental organisations concerned with social sciences.



## CHAPTER 21

### EMPLOYMENT AND UNEMPLOYMENT

Further detail on subjects dealt with in this chapter is contained in the *Labour Report* and other publications of this Bureau. For subjects relating to population censuses reference should be made to the series of mimeographed and printed publications listed in the *Publications of the Commonwealth Bureau of Census and Statistics*. Detailed information on the labour force and on employment and unemployment is contained in mimeographed bulletins *The Labour Force* and *Employment and Unemployment*. Current information is also available in the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and the *Quarterly Summary of Australian Statistics*, and preliminary employment estimates are issued in a monthly statement *Employed Wage and Salary Earners*.

#### THE LABOUR FORCE

This chapter contains a number of series relating to the labour force and its components. The labour force comprises two categories of persons: those who are employed and those who are unemployed. In the first category are included employers, self-employed persons, wage and salary earners, and unpaid helpers. Comprehensive details for each State and Territory and for Australia as a whole in respect of persons in the labour force, classified according to industry, occupation and occupational status (i.e. whether employers, self-employed persons, wage and salary earners or unpaid helpers) and personal characteristics such as age, sex, marital status and birthplace, are obtained only at a general census of population. Information about the labour force questions in the population census of June 1966 and a table showing the industry and occupational status of the labour force are given on this and the following two pages.

In the periods between population censuses, estimates of the labour force for the whole of Australia are obtained through the population survey, which is carried out by means of personal interviews at a one per cent sample of households throughout Australia in February, May, August and November each year (see pages 683–95). The survey provides, in addition to particulars of the demographic composition of the labour force, broad estimates of occupational status, occupation, industry and hours of work.

Detailed industry estimates for each State and Territory are obtained only in respect of wage and salary earners, through a monthly collection from employers. These estimates, which exclude employees in agriculture and private domestic service, are based on benchmarks derived from the population census, but they do not agree exactly with census figures at relevant dates because of a different method of allocating employees to industries. Further information about estimates of employed wage and salary earners is given on pages 704–8.

#### The population census\*

A new definition of the labour force† was adopted at the 1966 census, which conformed closely to the recommendations of the Eighth International Conference of Labour Statisticians, held in Geneva in 1954. At the census the following questions were asked.

16. 'Did the person have a job or business of any kind last week (even though he may have been temporarily absent from it)? ANSWER "YES" or "NO".'
17. 'Did the person do any work at all last week for payment or profit? ANSWER "YES" or "NO". Persons working without pay as a helper in a "family business" or farm and members of the clergy and of religious orders (other than purely contemplative orders) should answer "YES" to this question. Persons doing only unpaid housework should answer "NO".'
18. 'Was the person temporarily laid off by his employer without pay for the whole of last week? ANSWER "YES" or "NO".'

\* Particulars of Aborigines are not included in the table on page 687. See page 119, Chapter 7, Population. † The term 'work force' has been used in 1966 census publications and has the same meaning as the term 'labour force'.

19. 'Did the person look for work last week? ANSWER "YES" or "NO". (Note. "Looking for work" means (i) being registered with Commonwealth Employment Service, or (ii) approaching prospective employers, or (iii) placing or answering advertisements, or (iv) writing letters of application, or (v) awaiting the result of recent applications).'

The labour force includes all persons for whom the answer 'yes' was given to any one of these four questions, except that persons helping but not receiving wages or a salary who usually worked less than fifteen hours a week were excluded from the labour force. Persons under fifteen years of age were also excluded by definition from the labour force.

Persons in the labour force were classified into two categories: those employed and those unemployed. A person was considered to be unemployed if he answered the above questions in any one of the following ways.

<i>Question No.</i>	<i>In labour force—Unemployed</i>				
16.	No	No	No	Yes	Yes
17.	No	No	No	No	No
18.	No	Yes	Yes	Yes	Yes
19.	Yes	No	Yes	No	Yes

The net effect of the new definition was to include approximately 108,000 additional persons in the Australian labour force, i.e. a proportionate increase of approximately 2.3 per cent. The major factor in this change was females working part-time (sometimes for only a few hours a week), some of whom, at earlier censuses, did not consider themselves as '... engaged in an industry, business, profession, trade or service.'

#### **Industry and occupational status of the labour force**

At the 1966 census persons in the labour force were asked to state industry in accordance with the following instructions.

'State the exact branch of industry, business or service in which mainly engaged last week, using two or more words where possible. For example, "Dairy Farming", "Coal Mining", "Woollen Mills", "Retail Grocery", "Road Construction", etc. Employees should state the industry of their employer. For example, a carpenter employed by a coal mining company should state "Coal Mining". If employed by a Government Department or other public body, state also its name. For paid housekeepers and domestic servants in private households, write "P.H.".'

From the answers to this question, persons were classified according to the Bureau's *Classification of Industries*, which provides for each person to be classified according to the nature of the business in which mainly engaged, regardless of whether operated by a government authority, corporation, or individual.

Males and females in the labour force at the 1966 census are classified in the following table according to industry and occupational status. Only the major industry groups are shown; particulars for each sub-group are available in the mimeographed 1966 Census Bulletin No. 9.6, *Population: By Industry and Occupational Status, Australia* and in the corresponding bulletin for each State and Territory. Persons in the labour force in each industry sub-group were shown for Australia on pages 1117-19 of Year Book No. 55.

**LABOUR FORCE, BY INDUSTRY AND OCCUPATIONAL STATUS: AUSTRALIA, CENSUS  
30 JUNE 1966**

Industry (major group)	Employed				Total	Un- employed	Total in the labour force	Proportion of total (per cent)
	Employer	Self- employed	Employee (on wage or salary)	Helper (not on wage or salary)				
MALES								
Primary production . . .	74,684	156,171	138,337	8,085	377,277	4,065	381,342	11.14
Mining and quarrying . . .	500	1,600	51,424	66	53,590	437	54,027	1.58
Manufacturing . . .	26,073	20,629	934,120	820	981,642	6,935	988,577	28.89
Electricity, gas, water and sani- tary services (production, supply and maintenance) . . .	275	232	97,968	75	98,550	365	98,915	2.89
Building and construction . . .	33,649	39,479	334,191	447	407,766	5,812	413,578	12.09
Transport and storage . . .	11,906	25,700	213,040	251	250,897	1,926	252,823	7.39
Communication . . .	..	5	80,163	46	80,214	246	80,460	2.35
Finance and property . . .	4,358	6,633	95,895	142	107,028	334	107,362	3.14
Commerce . . .	56,144	39,978	379,170	957	476,249	3,243	479,492	14.01
Public authority (n.e.i.) and defence services . . .	..	..	162,990	3	162,993	418	163,411	4.78
Community and business ser- vices (including professional)	22,658	7,734	198,531	1,223	230,146	819	230,965	6.75
Amusement, hotels and other accommodation, cafes, per- sonal service, etc. . .	19,374	16,289	88,029	552	124,244	1,458	125,702	3.67
Other industries . . .	6	15	67	..	88	4	92	..
Industry inadequately de- scribed or not stated . . .	764	1,343	23,193	381	25,681	19,387	45,068	1.32
Total males in labour force	250,391	315,808	2,797,118	13,048	3,376,365	45,449	3,421,814	100.00
FEMALES								
Primary production . . .	12,747	21,747	24,274	16,108	74,876	433	75,309	5.25
Mining and quarrying . . .	40	54	2,193	19	2,306	10	2,316	0.16
Manufacturing . . .	5,333	5,056	308,952	1,151	320,492	3,056	323,548	22.55
Electricity, gas, water and sani- tary services (production, supply and maintenance) . . .	31	10	7,039	10	7,090	31	7,121	0.50
Building and construction . . .	2,296	846	11,253	566	14,961	90	15,051	1.05
Transport and storage . . .	1,431	1,321	21,878	468	25,098	166	25,264	1.76
Communication . . .	2	4	22,957	49	23,012	177	23,189	1.62
Finance and property . . .	674	1,474	70,125	225	72,498	361	72,859	5.08
Commerce . . .	21,367	20,330	257,748	4,332	303,777	2,589	306,366	21.35
Public authority (n.e.i.) and defence services . . .	..	..	46,365	4	46,369	273	46,642	3.25
Community and business ser- vices (including professional)	2,929	5,389	301,888	3,236	313,442	2,575	316,017	22.03
Amusement, hotels and other accommodation, cafes, per- sonal service, etc. . .	12,835	11,067	139,833	3,001	166,736	2,431	169,167	11.79
Other industries . . .	..	2	26	..	28	7	35	..
Industry inadequately de- scribed or not stated . . .	536	1 119	26,911	3,148	31,714	20,043	51,757	3.61
Total females in labour force	60,221	68,419	1,241,442	32,317	1,402,399	32,242	1,434,641	100.00
PERSONS								
Primary production . . .	87,431	177,918	162,611	24,193	452,153	4,498	456,651	9.40
Mining and quarrying . . .	540	1,654	53,617	85	55,896	447	56,343	1.16
Manufacturing . . .	31,406	25,685	1,243,072	1,971	1,302,134	9,991	1,312,125	27.02
Electricity, gas, water and sani- tary services (production, supply and maintenance) . . .	306	242	105,007	85	105,640	396	106,036	2.18
Building and construction . . .	35,945	40,325	345,444	1,013	422,727	5,902	428,629	8.83
Transport and storage . . .	13,337	27,021	234,918	719	275,995	2,092	278,087	5.73
Communication . . .	2	9	103,120	95	103,226	423	103,649	2.13
Finance and property . . .	5,032	8,107	166,020	367	179,526	695	180,221	3.71
Commerce . . .	77,511	60,308	636,918	5,289	780,026	5,832	785,858	16.18
Public authority (n.e.i.) and defence services . . .	..	..	209,355	7	209,362	691	210,053	4.33
Community and business ser- vices (including professional)	25,587	13,123	500,419	4,459	543,588	3,394	546,982	11.26
Amusement, hotels and other accommodation, cafes, per- sonal service, etc. . .	32,209	27,356	227,862	3,553	290,980	3,889	294,869	6.07
Other industries . . .	6	17	93	..	116	11	127	..
Industry inadequately de- scribed or not stated . . .	1,300	2,462	50,104	3,529	57,395	39,430	96,825	1.99
Total persons in labour force	310,612	384,227	4,038,560	45,365	4,778,764	77,691	4,856,455	100.00



### The population survey

The population survey is the general title given to the household sample survey carried out in February, May, August and November of each year in all States and Territories. Emphasis in the survey is placed on the collection of data on demographic and labour force characteristics, the principal survey component being referred to as the labour force survey. The remaining part of the population survey consists of supplementary collections which are carried out from time to time in conjunction with the labour force survey.

The population survey was instituted in November 1960 in the six State capital cities, and was extended to include non-metropolitan areas as from February 1964. About 40,000 households, representing one per cent of all households, are selected by area sampling methods and enumerated each quarter, the information being obtained by carefully chosen and specially trained interviewers during a four-week period on each occasion.

A description of the labour force survey and a selection of principal statistics obtained from it are given in this section. Data from supplementary surveys are published in mimeographed bulletins which are available on request. Results of the surveys Leavers from Schools, Universities or Other Educational Institutions, February 1965, 1966 and 1967, and Multiple Jobholding, were given in Year Book No. 54, pages 1162-6. Results of the Surveys Chronic Illnesses, Injuries and Impairments, May 1968; Post-school Study Courses, August 1968; and Child Care, May 1969, were given in Year Book No. 56. More recent surveys, results of which are included in this issue, include Labour Force Experience during 1968 and Leavers from Schools, Universities or Other Educational Institutions, February 1968, 1969 and 1970. (See pages 695-704).

### The labour force survey

The labour force survey commenced in November 1960, and until November 1963 it was confined to the six State capital cities. The first survey for the whole of Australia was carried out in February 1964. Quarterly estimates of the civilian labour force in the six capital cities were published regularly in the mimeographed bulletin *Employment and Unemployment*, and covered the period November 1960 to May 1968. Thereafter they were discontinued. Estimates covering the whole of Australia are published quarterly in the mimeographed bulletin *The Labour Force* (Reference No. 6.20). More comprehensive statistics have been published in three bulletins *The Labour Force, 1964 to 1968*, *The Labour Force, 1969*, and *The Labour Force, 1970*.

The survey includes all persons fifteen years of age and over (including full-blood Aborigines), except members of the permanent armed forces, national servicemen enlisted in the Regular Army Supplement and certain diplomatic personnel customarily excluded from census and estimated populations.

The classification used in the survey conforms closely to that recommended by the Eighth International Conference of Labour Statisticians held in Geneva in 1954. In this classification, the labour force category to which an individual is assigned depends on his actual activity (i.e. whether working, looking for work, etc.) during a specified week, known as 'survey week', which is the week immediately preceding that in which the interview takes place. The interviews are carried out during a period of four weeks, so that there are four survey weeks in each of the months to which the survey relates. These survey weeks generally fall within the limits of the calendar month.

A person's activity during survey week is determined from answers given to a set of questions specially designed for this purpose. The principal categories appearing in the tables in this section are the employed and unemployed, who together constitute the labour force, and the remainder, who are classified as not in the labour force. Definitions of these categories are as follows:

- (i) *The labour force* comprises all persons who, during survey week, were employed or unemployed as defined in (ii) and (iii) below.
- (ii) *Employed persons* comprise all those who, during survey week,
  - (a) did any work for pay, profit, commission or payment in kind, in a job or business, or on a farm (including employees, employers and self-employed persons), or
  - (b) worked fifteen hours or more without pay in a family business (or farm), or
  - (c) had a job, business or farm, but were not at work because of illness, accident, leave, holiday or industrial dispute; or because of production hold-up due to bad weather, plant breakdown, etc.

A person who had a job but was temporarily laid off by his employer for the whole week without pay is excluded, and is classified in the tables as unemployed. A person who did some work during the week, however, before he either lost his job or was laid off, is classified as employed. A person who held more than one job is counted only once, in the job at which he worked most hours during survey week.



(iii) *Unemployed persons* comprise all those who, during survey week, did no work at all, and who either,

(a) did not have a job or business and were actively looking for work (including those who stated that they would have looked for work if they had not been temporarily ill or believed no work was available, or had not already made definite arrangements to start work in a new job after survey week), or

(b) were laid off from their jobs without pay for the whole week.

A person who either lost his job or was laid off *during* survey week, but did some work at his job during that week, is classified as employed.

(iv) *Persons not in the labour force* are all those who, during survey week, were not in the categories 'employed' or 'unemployed' as defined. This category therefore includes persons without a job, business or farm who were not actively looking for work, and who, during survey week, were either keeping house (unpaid), attending school, university, etc., retired or voluntarily idle, permanently unable to work or inmates of institutions. A person who worked less than fifteen hours without pay in a family business during survey week is also classified as not in the labour force.

Figures of total population fifteen years of age and over for each sex are derived from the official population estimates, which in turn are based on the census of June 1966. Figures of marital status and all labour force characteristics of these populations are derived from the sample survey data. For this and other reasons, including differences in timing, methods of collection (personal interview in the survey, self-enumeration in the census) and, in some cases, concepts and definitions, the survey estimates of marital status and labour force characteristics for May 1966 may not agree closely with the corresponding census figures for June 1966.

#### Reliability of the estimates

Since the estimates which appear in the following tables are based on a sample, they may differ from the figures that would have been obtained from a complete census using the same questionnaires and procedures. One measure of the likely difference is given by the standard error, which indicates the extent to which an estimate might have varied by chance because only a sample, and not the whole population, was enumerated. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained from a comparable complete enumeration, and about nineteen chances in twenty that the difference will be less than two standard errors.

Space does not allow for the separate indication of the standard errors of all estimates in this section. A table of standard errors which is intended to be of general application is therefore given below (Table A), and approximate standard errors of estimates of the total number of persons in Australia in each of the principal employment status categories, classified by sex only, in Table B.

The standard errors in these tables are averages based on calculations for a limited number of surveys and are also averages over a wide range of labour force characteristics. These figures thus give not a precise measure but an indication of the magnitude of the standard error of any particular estimate for any particular survey. An example of the use of Table A is as follows: if the estimate obtained from the sample is 100,000 and the standard error is 3 per cent of the estimate, i.e. 3,000, there are about two chances in three that the true figure is within the range 97,000 to 103,000 and about nineteen chances in twenty that this figure is within the range 94,000 to 106,000.

TABLE A  
STANDARD ERRORS OF QUARTERLY ESTIMATES

Size of estimate (persons)	Approximate standard error of estimates	
	Persons	Percentage of estimate
4,000 . . . . .	750	19
5,000 . . . . .	850	17
10,000 . . . . .	1,100	11
20,000 . . . . .	1,400	7
50,000 . . . . .	2,000	4
100,000 . . . . .	3,000	3
200,000 . . . . .	4,000	2
500,000 . . . . .	5,000	1
1,000,000 . . . . .	5,500	0.6
2,000,000 . . . . .	8,000	0.4

TABLE B  
STANDARD ERRORS OF PRINCIPAL EMPLOYMENT STATUS CATEGORIES

Category	Approximate standard error of estimates					
	Males		Females		Persons	
	'000	Per cent	'000	Per cent	'000	Per cent
Employed—						
Agriculture . . . .	12	3.2	3	6.3	14	3.2
Other industries. . . .	8	0.3	10	0.7	12	0.3
Total . . . . .	8	0.2	10	0.7	12	0.3
Unemployed . . . . .	2	6.1	2	5.7	3	4.4
Labour force . . . . .	7	0.2	10	0.7	12	0.3
Not in the labour force . . . .	7	1.1	10	0.4	12	0.4

It should be noted that the standard errors of estimates relating to agricultural employment are generally somewhat higher than the standard errors of other estimates of the same magnitude. (See note to following table). Estimates for females also tend to have higher standard errors relative to estimates of equivalent size for male in similar employment categories.

The reliability of an estimated percentage, computed by using sample data for both numerator and denominator, depends upon both the size of the percentage and the size of the denominator. Percentages quoted in the following tables, and any other percentages calculated from figures shown, have generally somewhat lower proportional standard errors than have the estimates which form the numerators of the percentages, particularly where the percentages are large.

As the standard errors in Table A show, the smaller the estimate the higher is the relative standard error. Very small estimates would thus be subject to such high standard errors (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In the following tables, estimates less than 4,000 have not been shown. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of imperfections in reporting by interviewers and respondents. Inaccuracies of this kind are referred to as the non-sampling error, and they may occur in any enumeration, whether it be a full count or only a sample. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers and efficient operating procedures.

CIVILIAN POPULATION 15 YEARS OF AGE AND OVER(a)  
BY EMPLOYMENT STATUS: AUSTRALIA

May—	Employed(b) (‘000)	Unemployed(b)		Total labour force(b)		Not in labour force(b) (‘000)	Civilian population aged 15 and over (a) (‘000)
		Number (‘000)	Per cent of labour force	Number (‘000)	Per cent of popu- lation(c)		
MALES							
1967 . . . . .	3,393.4	40.0	1.2	3,433.4	83.6	671.2	4,104.6
1968 . . . . .	3,459.1	37.7	1.1	3,496.8	83.4	698.5	4,195.3
1969 . . . . .	3,544.4	35.4	1.0	3,579.8	83.3	715.1	4,294.9
1970 . . . . .	3,630.8	33.9	0.9	3,664.7	83.4	731.5	4,396.2
1971 . . . . .	3,693.9	44.0	1.2	3,737.9	83.2	757.3	4,495.2

For footnotes see next page.

**CIVILIAN POPULATION 15 YEARS OF AGE AND OVER(a)  
BY EMPLOYMENT STATUS: AUSTRALIA—continued**

May—	Employed(b) (‘000)	Unemployed(b)		Total labour force(b)		Not in labour force(b) (‘000)	Civilian population aged 15 and over (a) (‘000)	
		Number (‘000)	Per cent of labour force	Number (‘000)	Per cent of popu- lation(c)			
MARRIED WOMEN								
1967 . . .	759.2	20.6	2.6	779.7	28.8	1,931.8	2,711.5	
1968 . . .	817.7	21.6	2.6	839.3	30.2	1,940.2	2,779.6	
1969 . . .	876.6	23.2	2.6	899.7	31.4	1,964.0	2,863.7	
1970 . . .	962.5	22.0	2.2	984.5	33.5	1,958.4	2,943.0	
1971 . . .	1,040.4	24.1	2.3	1,064.5	35.2	1,962.3	3,026.8	
OTHER FEMALES(d)								
1967 . . .	703.1	18.2	2.5	721.3	49.6	733.0	1,454.4	
1968 . . .	708.4	19.3	2.6	727.6	49.2	750.3	1,477.9	
1969 . . .	701.4	16.5	2.3	717.9	48.1	774.5	1,492.4	
1970 . . .	720.9	15.6	2.1	736.5	48.6	778.3	1,514.8	
1971 . . .	718.0	14.6	2.0	732.6	47.9	797.8	1,530.4	
ALL FEMALES								
1967 . . .	1,462.3	38.8	2.6	1,501.1	36.0	2,664.8	4,165.9	
1968 . . .	1,526.1	40.9	2.6	1,567.0	36.8	2,690.5	4,257.5	
1969 . . .	1,578.0	39.7	2.5	1,617.6	37.1	2,738.5	4,356.1	
1970 . . .	1,683.4	37.7	2.2	1,721.1	38.6	2,736.7	4,457.8	
1971 . . .	1,758.4	38.7	2.2	1,797.1	39.4	2,760.1	4,557.2	
PERSONS								
1967 . . .	4,855.7	78.8	1.6	4,934.4	59.7	3,336.1	8,270.5	
1968 . . .	4,985.2	78.5	1.6	5,063.7	59.9	3,389.1	8,452.8	
1969 . . .	5,122.4	75.1	1.4	5,197.4	60.1	3,453.6	8,651.0	
1970 . . .	5,314.2	71.5	1.3	5,385.8	60.8	3,468.2	8,854.0	
1971 . . .	5,452.3	82.7	1.5	5,535.0	61.1	3,517.4	9,052.4	

(a) For a note on persons excluded see explanatory notes on page 688.

(b) For definitions see page 688.

(c) The labour force in each group as a percentage of the civilian population aged 15 years and over in the same group (labour force participation rate).

(d) Never married, widowed and divorced.

NOTE. Separate figures for agriculture and other industries, which were published in previous issues, have not been shown in the table above. When this chapter was sent for press the estimates for persons employed in agriculture were under review.

**CIVILIAN LABOUR FORCE(a), BY AGE AND MARITAL STATUS  
AUSTRALIA, MAY 1971**

Age group (years)	Married			Not married(b)			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
NUMBER ('000)									
15-19 . . .	7.2	19.6	26.8	341.9	305.9	647.8	349.2	325.4	674.6
20-24 . . .	188.1	158.9	347.0	314.8	173.4	488.2	502.9	332.4	835.2
25-34 . . .	702.8	271.5	974.3	156.5	66.1	222.7	859.3	337.6	1,196.9
35-44 . . .	680.6	297.0	977.5	78.9	48.3	127.3	759.5	345.3	1,104.8
45-54 . . .	623.5	234.0	857.5	70.0	62.6	132.6	693.5	296.5	990.1
55-59 . . .	245.0	57.0	302.0	31.8	36.7	68.5	276.8	93.7	370.5
60-64 . . .	167.4	20.0	187.4	26.2	22.6	48.8	193.6	42.7	236.2
65 and over .	82.3	6.5	88.8	20.9	16.9	37.8	103.2	23.4	126.6
Total . . .	2,696.8	1,064.5	3,761.3	1,041.0	732.6	1,773.7	3,737.9	1,797.1	5,535.0

PER CENT OF POPULATION(c)									
15-19 . . .	93.0	44.5	51.8	61.1	60.3	60.7	61.6	59.0	60.3
20-24 . . .	97.8	45.8	64.3	88.9	89.0	89.0	92.1	61.3	76.8
25-34 . . .	98.8	36.1	66.6	92.3	80.6	88.5	97.6	40.5	69.8
35-44 . . .	98.7	44.6	72.2	90.1	75.9	84.1	97.8	47.4	73.4
45-54 . . .	96.8	38.6	68.6	85.5	59.2	70.7	95.6	41.6	68.9
55-59 . . .	93.0	24.4	60.8	74.5	46.5	56.3	90.4	30.0	59.9
60-64 . . .	80.4	12.3	50.6	64.6	24.3	36.5	77.8	16.7	46.8
65 and over .	26.0	3.0	16.7	16.4	4.2	7.1	23.2	3.8	11.9
Total . . .	89.0	35.2	62.1	71.1	47.9	59.2	83.2	39.4	61.1

(a) Aged 15 years and over. For definitions see page 688. (b) Never married, widowed and divorced. (c) The labour force in each group as a percentage of the civilian population in the same group.

**CIVILIAN LABOUR FORCE(a), BY INDUSTRY: AUSTRALIA, MAY 1971  
('000)**

Industry group	Males	Females	Persons
Manufacturing . . . . .	1,078.8	378.5	1,457.3
Building and construction . . . . .	451.2	24.2	475.4
Transport and storage . . . . .	263.4	33.9	297.3
Finance and property . . . . .	146.8	100.5	247.3
Commerce . . . . .	574.0	415.5	989.5
Community and business services(b) . . . . .	280.0	439.7	719.7
Amusement, hotels, personal service, etc. . . . .	144.5	226.1	370.7
Other industries . . . . .	796.7	175.4	972.1
No previous work experience(c) . . . . .	*	*	5.9
Total . . . . .	3,737.9	1,797.1	5,535.0

(a) Aged 15 years and over. For definitions see page 688. (b) Comprises law, order and public safety; religion and social welfare; health, hospitals, etc.; education; and other community and business services (including professional). (c) Looking for first job.

\* Estimates less than 4,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.



**CIVILIAN LABOUR FORCE(a), BY OCCUPATION: AUSTRALIA, MAY 1971**  
(<sup>'000</sup>)

<i>Occupation group</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
Professional, technical and related workers . . . . .	344.8	252.7	597.5
Administrative, executive and managerial workers . . . . .	313.7	39.3	353.0
Clerical workers . . . . .	329.7	572.6	902.4
Sales workers . . . . .	225.5	234.8	460.2
Farmers, fishermen, timber getters, etc. . . . .	401.1	58.8	459.9
Transport and communication workers . . . . .	281.2	51.4	332.6
Craftsmen, production-process workers and labourers, n.e.c.(b) . . . . .	1,672.1	268.9	1,941.0
Service, sport and recreation workers . . . . .	167.3	315.2	482.5
No previous work experience(c) . . . . .	*	*	5.9
<b>Total . . . . .</b>	<b>3,737.9</b>	<b>1,797.1</b>	<b>5,535.0</b>

(a) Aged 15 years and over. For definitions *see* page 688.  
and related workers. (c) Looking for first job.

(b) Includes miners, quarrymen

\* *See* footnote \* to previous table.

**EMPLOYED PERSONS(a), BY HOURS WORKED(b): AUSTRALIA**  
(<sup>'000</sup>)

Hours worked during survey week									Average hours worked(d)
May	0(c)	1-29	30-34	35-39	40	41-48	49 and over	Total	
MALES									
1967 . .	175.4	127.5	108.4	243.3	1,624.5	462.4	651.8	3,393.4	41.2
1968 . .	188.7	142.6	111.9	256.8	1,613.8	489.6	655.7	3,459.1	41.0
1969 . .	194.1	167.5	227.3	282.8	1,474.0	504.1	694.6	3,544.4	40.8
1970 . .	217.3	165.3	157.0	320.6	1,449.3	547.1	774.3	3,630.8	41.2
1971 . .	225.9	175.3	149.2	322.9	1,461.2	561.6	797.8	3,693.9	41.1
MARRIED WOMEN									
1967 . .	50.9	203.1	54.5	76.8	291.8	35.9	46.2	759.2	31.6
1968 . .	55.9	226.8	58.4	84.7	307.2	38.8	46.0	817.7	31.1
1969 . .	63.4	256.8	85.8	95.7	286.7	41.6	46.6	876.6	30.2
1970 . .	68.4	285.0	68.7	121.6	311.0	51.6	56.2	962.5	30.6
1971 . .	86.0	299.8	74.6	125.2	341.7	55.3	57.7	1,040.4	30.2
OTHER FEMALES(e)									
1967 . .	42.5	59.8	36.3	130.2	358.9	45.6	29.7	703.1	35.7
1968 . .	42.8	65.8	42.6	135.7	348.2	46.7	26.6	708.4	35.2
1969 . .	41.1	68.2	53.7	141.0	325.4	48.5	23.5	701.4	34.9
1970 . .	51.2	72.9	43.6	153.7	315.9	56.2	27.4	720.9	34.5
1971 . .	59.8	73.9	40.4	149.1	310.0	56.6	28.1	718.0	33.9
ALL FEMALES									
1967 . .	93.4	262.9	90.8	207.0	650.7	81.5	75.9	1,462.3	33.5
1968 . .	98.7	292.6	100.9	220.4	655.4	85.4	72.5	1,526.1	33.0
1969 . .	104.5	325.0	139.4	236.8	612.1	90.0	70.1	1,578.0	32.3
1970 . .	119.7	357.8	112.3	275.3	626.9	107.8	83.6	1,683.4	32.2
1971 . .	145.8	373.7	115.1	274.3	651.7	112.0	85.9	1,758.4	31.7

For footnotes *see* next page.

EMPLOYED PERSONS(a), BY HOURS WORKED(b): AUSTRALIA—continued  
(’000)

Hours worked during survey week									Average hours worked(d)
May	0(c)	1-29	30-34	35-39	40	41-48	49 and over		
PERSONS									
1967 . .	268.8	390.4	199.2	450.3	2,275.2	543.9	727.7	4,855.7	38.9
1968 . .	287.4	435.3	212.8	477.2	2,269.2	575.0	728.3	4,985.2	38.6
1969 . .	298.6	492.5	366.7	519.6	2,086.1	594.1	764.7	5,122.4	38.2
1970 . .	336.9	523.1	269.3	595.9	2,076.2	654.9	857.9	5,314.2	38.3
1971 . .	371.7	549.0	264.3	597.2	2,112.9	673.6	883.7	5,452.3	38.1

(a) Civilians 15 years of age and over. For definitions see page 688. (b) Actual hours worked during survey week, not hours paid for. The figures may be affected by public holidays, leave, absenteeism; temporary absence from work due to sickness, accidents, and industrial disputes; and work stoppages due to bad weather, plant breakdown, etc.  
(c) Excludes persons laid off for the whole of survey week without pay; these persons are classified as unemployed.  
(d) Persons with jobs who did not work during survey week have been included in the calculation of average hours worked.  
(e) Never married, widowed and divorced.

EMPLOYED PERSONS(a) WHO WORKED LESS THAN 35 HOURS(b) BY REASON: AUSTRALIA  
(’000)

May—	Usually work 35 hours or more				Usually work less than 35 hours			
	Reason for working less than 35 hours			Total	Reason for working less than 35 hours		Total	
	Leave or holiday	Own illness or injury	Other reasons		Lack of work	Other reasons		
MALES								
1967 . . .	177.5	81.6	27.5	286.6	9.3	115.5	124.8	
1968 . . .	184.0	83.6	50.3	317.9	7.1	118.2	125.2	
1969 . . .	205.5	86.1	(c)159.6	451.2	7.4	130.3	137.7	
1970 . . .	261.1	93.3	61.0	415.4	7.2	117.0	124.2	
1971 . . .	281.2	90.0	53.0	424.2	10.5	115.6	126.1	
FEMALES								
1967 . . .	64.0	28.7	10.4	103.1	11.3	332.6	344.0	
1968 . . .	67.2	33.5	9.2	109.9	14.5	367.9	382.4	
1969 . . .	78.0	37.3	(c)41.1	156.4	17.1	395.5	412.6	
1970 . . .	115.3	36.6	7.3	159.2	13.7	416.8	430.5	
1971 . . .	135.0	36.3	8.1	179.4	14.9	440.3	455.2	
PERSONS								
1967 . . .	241.5	110.3	38.0	389.7	20.7	448.1	468.8	
1968 . . .	251.2	117.1	59.5	427.8	21.6	486.1	507.6	
1969 . . .	283.5	123.4	(c)200.7	607.6	24.5	525.7	550.2	
1970 . . .	376.5	129.9	68.2	574.6	20.9	533.8	554.8	
1971 . . .	416.2	126.3	61.1	603.6	25.4	555.9	581.3	

(a) Civilians 15 years of age and over. For definitions see page 688.  
(c) Affected by industrial disputes.

(b) See note (b) to previous table.

## UNEMPLOYED PERSONS(a): AUSTRALIA

May—	Age (years)				Duration of unemployment(b)				Looking for—		Total
	15-19		20 and over								
	Number unem- ployed ( <sup>'000</sup> )	Per cent of labour force	Number unem- ployed ( <sup>'000</sup> )	Per cent of labour force	Under 2 weeks ( <sup>'000</sup> )	2 and under 4 weeks ( <sup>'000</sup> )	4 and under 13 weeks ( <sup>'000</sup> )	13 weeks and over ( <sup>'000</sup> )	Full- time work(c) ( <sup>'000</sup> )	Part- time work(d) ( <sup>'000</sup> )	
MALES											
1967 .	11.1	3.2	28.9	0.9	10.8	11.1	9.6	8.6	37.2	*	40.0
1968 .	10.5	3.2	27.2	0.9	7.1	12.5	11.9	6.2	35.7	*	37.7
1969 .	7.7	2.3	27.7	0.9	6.9	10.4	11.1	7.0	33.4	*	35.4
1970 .	8.2	2.4	25.7	0.8	8.6	13.6	8.3	*	31.5	*	33.9
1971 .	12.0	3.4	32.0	0.9	7.5	17.7	13.7	5.1	41.5	*	44.0
FEMALES											
1967 .	14.5	4.4	24.2	2.1	8.1	10.2	9.0	11.5	30.2	8.6	38.8
1968 .	13.3	4.2	27.6	2.2	9.3	9.5	13.2	8.9	29.5	11.4	40.9
1969 .	12.0	3.8	27.7	2.1	10.6	11.0	10.3	7.8	27.8	11.8	39.7
1970 .	11.4	3.6	26.3	1.9	10.2	9.0	13.3	5.2	23.9	13.8	37.7
1971 .	10.1	3.1	28.6	1.9	9.3	11.3	11.6	6.4	26.7	11.9	38.7
PERSONS											
1967 .	25.6	3.8	53.1	1.2	18.9	21.2	18.6	20.1	67.3	11.4	78.8
1968 .	23.8	3.7	54.8	1.2	16.4	22.0	25.0	15.1	65.1	13.4	78.5
1969 .	19.7	3.0	55.4	1.2	17.5	21.4	21.4	14.8	61.2	13.8	75.1
1970 .	19.5	3.0	52.0	1.1	18.8	22.6	21.6	8.6	55.3	16.2	71.5
1971 .	22.1	3.3	60.6	1.2	16.8	29.0	25.3	11.5	68.3	14.4	82.7

(a) Civilians 15 years of age and over. For definitions see page 688. (b) Period from the time the person began looking for work, or was laid off, to the end of survey week. (c) Includes persons laid off from full-time jobs. (d) Includes persons laid off from part-time jobs.

\* Estimates less than 4,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

## Survey of Labour Force Experience During 1968

In February 1969 a survey, based on the quarterly population survey (see page 688), was conducted throughout Australia in order to obtain information about the labour force attachment of persons aged fifteen years and over during 1968. Information obtained included the length of time during which persons were employed, unemployed or not in the labour force, the number of times unemployed, the main activity of those not in the labour force and, for persons who completed their schooling in Australia, the highest level of schooling completed. For wage and salary earners, particulars were also obtained in respect of frequency of pay and the amount of paid annual leave taken. For the labour force experience survey, questions were not asked of inmates of institutions such as hospitals, sanatoria and gaols, for whom, for the purposes of the survey, the institution was regarded as their dwelling.

Each person was assigned to a labour force category for each week in 1968, on the basis of his actual activity (i.e. whether working, looking for work, etc.) during that week. The *labour force* comprises all persons who, during the survey week, were employed or unemployed, according to the definitions customarily used in the population survey. *Employed* persons are those who, during the survey week, did any work for pay or profit, etc., in a job or business, or on a farm, worked fifteen hours or more without pay in a family business (or farm), or had a job, business or farm from which they were temporarily absent. *Unemployed* persons are those who, during the survey week, did not have a job or business and were actively looking for work or were laid off from their jobs without pay for the whole week. For more detailed definitions see page 688.

A person was classified as having worked mostly full time in 1968 if the number of weeks in which he worked 35 hours or more (full-time work) exceeded or was equal to the number of weeks in which he worked less than 35 hours (part-time work). If the number of weeks worked full time was less than the number of weeks worked part time he was classified as having worked mostly part time. When absent on paid leave (including paid sick leave) he was classified according to the usual hours worked in the job from which he was absent.

In recording paid annual leave taken by persons who were mostly wage and salary earners during 1968, separate periods of leave taken within a month were aggregated. Provision was not made in the survey for recording leave taken by a person in more than three different months.

The standard errors given in Table A on page 689, and, in general, the comments on the reliability of estimates on pages 689-90 are also applicable to this survey.

Further details of the survey were published in the mimeographed bulletin *Labour Force Experience During 1968* (Reference No. 6.26).

**CIVILIAN POPULATION, BY EMPLOYMENT STATUS, AUSTRALIA(a), 1968**  
(<sup>'000</sup>)

<i>Employment status(b)</i>	<i>Males</i>	<i>Married women</i>	<i>All females</i>	<i>Persons</i>
In the labour force at some time during the year . . . . .	3,650.3	1,088.1	1,841.0	5,491.3
For the whole year . . . . .	3,164.2	597.2	1,138.5	4,302.7
For part of the year— . . . . .	486.2	490.9	702.5	1,188.6
1 and under 4 weeks . . . . .	40.1	30.7	62.7	102.9
4 and under 13 weeks . . . . .	69.2	101.4	147.8	217.0
13 and under 26 weeks . . . . .	37.6	96.8	121.9	159.5
26 and under 39 weeks . . . . .	74.9	109.4	143.0	217.9
39 and under 49 weeks . . . . .	156.0	111.7	163.3	319.3
49 and under 52 weeks . . . . .	108.4	40.8	63.7	172.2
Employed at some time during the year . . . . .	3,636.6	1,075.9	1,815.3	5,451.9
Mostly full time . . . . .	3,538.4	731.3	1,401.6	4,940.0
Mostly part time . . . . .	98.2	344.6	413.7	511.9
Unemployed at some time during the year . . . . .	229.6	87.4	180.3	409.9
One period of unemployment . . . . .	158.6	70.3	144.4	303.0
Two or more periods of unemployment . . . . .	70.9	17.1	36.0	106.9
Out of the labour force for the whole year . . . . .	572.6	1,749.9	2,440.7	3,013.3

(a) Persons aged 15 years and over in February 1969. The figures are affected by deaths, migration and other exits from the labour force between the end of 1968 and February 1969, when the interviews were carried out. (b) For definitions see page 688.

**PERSONS IN THE LABOUR FORCE(a), BY AGE, AUSTRALIA, 1968**  
(<sup>'000</sup>)

<i>Age group (years)</i>	<i>In the labour force at some time during the year(b)</i>				<i>Average labour force(c)</i>			
	<i>Males</i>	<i>Married women</i>	<i>All females</i>	<i>Persons</i>	<i>Males</i>	<i>Married women</i>	<i>All females</i>	<i>Persons</i>
15-19 . . . . .	353.6	23.2	330.4	684.0	329.2	12.0	314.9	644.1
20-24 . . . . .	473.2	168.0	356.1	829.3	448.3	115.8	294.8	743.1
25-34 . . . . .	784.1	282.1	345.6	1,129.7	757.7	204.0	264.8	1,022.5
35-44 . . . . .	768.0	298.6	347.9	1,116.0	763.7	250.3	299.2	1,063.0
45-54 . . . . .	674.4	227.3	292.7	967.2	661.5	195.5	258.1	919.6
55-59 . . . . .	275.1	60.6	95.4	370.5	266.6	47.4	80.6	347.2
60-64 . . . . .	194.3	20.1	44.9	239.3	181.4	17.1	38.0	219.4
65 and over . . . . .	127.5	8.3	27.9	155.4	98.0	5.7	22.5	120.5
Total . . . . .	3,650.3	1,088.1	1,841.0	5,491.3	3,506.3	847.7	1,573.0	5,079.2

(a) For definitions see page 688. (b) See note (a) to table above. (c) Average for February, May, August and November 1968.



**PERSONS IN THE LABOUR FORCE(a), BY OCCUPATION AND LEVEL OF SCHOOLING  
AUSTRALIA, FEBRUARY 1969**  
(<sup>'000</sup>)

Occupation group	Completed schooling in Australia				Total	Completed schooling overseas	Total (b)
	Matriculated or passed Leaving	Passed Intermediate or Junior	Attended secondary school	Attended primary school			
Professional, technical, etc.	341.7	104.1	29.4	11.0	486.2	64.8	551.0
Architects, engineers and surveyors	31.1	4.3	*	*	36.6	9.4	46.0
Chemists, physicists, geologists and other physical scientists	8.7	*	*	*	9.3	*	11.1
Biologists, veterinarians, agronomists and related scientists	5.8	*	*	*	6.5	*	7.5
Medical practitioners and dentists	16.5	*	*	*	16.5	*	19.1
Nurses	27.1	36.2	8.7	4.7	76.7	8.9	85.6
Professional medical workers, n.e.c.	17.3	*	*	*	20.4	*	22.1
Teachers	138.6	13.5	*	*	155.8	13.2	169.6
Clergy, members of religious orders	6.3	*	*	*	9.5	*	10.1
Law professionals	10.1	*	*	*	10.6	*	10.1
Artists, entertainers, writers, etc.	13.0	11.2	4.9	*	30.8	4.3	35.7
Draftsmen and technicians, n.e.c.	36.3	18.7	4.1	*	60.8	12.1	73.0
Other professional, technical and related workers	30.9	15.6	4.9	*	52.7	8.3	61.0
Administrative, executive and managerial workers	62.2	105.3	58.3	41.3	267.2	55.3	322.9
Administrators and executive officials, government, n.e.c.	4.3	4.8	*	*	13.3	*	14.7
Employers, workers on own account, directors, managers, n.e.c.	57.9	100.6	55.7	39.6	253.8	53.9	308.2
Clerical workers	183.0	382.5	132.5	42.0	740.0	78.8	819.1
Book-keepers and cashiers	27.8	45.6	23.7	7.5	104.5	14.9	119.5
Stenographers and typists	31.6	108.7	29.7	4.5	174.5	15.5	190.1
Other clerical workers	123.7	228.2	79.1	30.0	460.9	48.4	509.5
Sales workers	42.8	129.2	128.1	57.1	357.1	61.6	419.7
Insurance, real estate salesmen, auctioneers and valuers	8.2	9.3	4.5	4.1	26.1	4.8	30.9
Commercial travellers and manufacturers' agents	10.9	24.0	12.6	4.4	51.8	8.9	60.8
Proprietors and shopkeepers working on own account, n.e.c., salesmen, shop assistants, etc.	23.7	95.8	111.1	48.6	279.2	47.9	328.0
Farmers, fishermen, hunters, timber-getters, etc.	30.4	85.1	141.5	170.2	427.1	43.1	472.4
Farmers and farm managers	16.6	49.9	69.6	95.8	231.8	22.5	254.8
Farm workers, including farm foremen, n.e.c.	13.0	31.9	64.6	64.9	174.3	18.2	194.2
Timber-getters and other forestry workers	*	*	*	7.0	12.7	*	14.2
Miners, quarrymen, etc.	*	5.2	12.2	11.6	29.4	5.9	35.3
Miners and quarrymen	*	4.5	11.0	9.7	25.6	5.2	30.8
Workers in transport and communication occupations	12.8	66.1	110.5	85.2	274.6	40.3	315.2
Drivers and firemen, railway	*	*	5.3	*	11.4	*	12.4
Drivers, road transport	5.1	31.5	70.9	61.0	168.5	26.0	194.7
Inspectors, supervisors, traffic controllers, despatchers	*	5.0	9.8	6.6	22.1	*	24.5
Telephone, telegraph operators, etc.	*	13.9	9.3	*	28.1	*	30.2
Postmasters, postmen and messengers	*	8.7	10.2	8.1	28.7	4.0	32.7
Craftsmen, production-process workers and labourers, n.e.c.	57.4	375.1	491.9	366.9	1,291.2	517.5	1,815.5
Spinners, weavers, knitters, dyers, etc.	*	4.3	9.3	6.9	20.9	18.2	39.3
Tailors, cutters, furriers, etc.	*	10.7	29.0	15.0	56.5	41.2	98.0
Leather-cutters, lasters and sewers (except gloves and garments), etc.	*	*	6.0	6.2	14.3	8.3	22.8
Furnacemen, rollers, drawers, moulders, etc.	*	*	7.1	*	14.0	7.7	21.8
Precision instrument makers, watch-makers, jewellers, etc.	*	6.4	4.9	*	14.3	4.0	18.3
Toolmakers, machinists, etc.	14.4	126.7	101.3	47.4	289.9	111.6	402.3
Electricians, etc.	11.9	59.2	29.2	14.3	114.6	22.5	137.2
Metal makers, metal workers, etc.	*	8.6	22.0	18.2	51.2	39.7	91.4
Carpenters, joiners, etc.	*	34.7	43.3	31.7	112.3	33.8	146.7
Painters and decorators	*	10.2	16.5	10.0	37.9	22.2	60.2
Bricklayers, plasterers and construction workers, n.e.c.	*	16.6	26.9	19.5	65.2	32.4	98.1
Compositors, pressmen, etc.	*	15.2	11.1	6.3	33.7	7.3	41.1

For footnotes see page 698.

PERSONS IN THE LABOUR FORCE(a), BY OCCUPATION AND LEVEL OF SCHOOLING:  
AUSTRALIA, FEBRUARY 1969—continued  
(’000)

Occupation group	Completed schooling in Australia					Completed schooling overseas	Total (b)
	Matri- culated or passed Leaving	Passed Inter- mediate or Junior	Attended secondary school	Attended primary school	Total		
Craftsmen, production-process workers and labourers, n.e.c.—continued							
Potters, kilnmen, glass and clay formers, etc.	*	*	4.1	*	7.8	5.8	13.5
Millers, bakers, brewmasters, etc.	*	17.8	36.0	27.9	84.0	19.8	104.0
Chemical and related process workers	*	*	5.7	6.2	15.9	6.8	22.7
Craftsmen and production-process workers, n.e.c.	*	5.9	12.4	10.8	30.2	17.6	48.6
Packers, labellers, etc.	*	7.5	17.6	11.3	38.2	18.2	56.8
Stationary engine, excavating, lifting equipment operators, etc.	*	10.5	25.5	30.6	68.6	20.5	89.2
Freight handlers, including waterside workers	4.3	19.5	38.4	40.0	102.2	23.7	126.2
Labourers, n.e.c.	4.6	12.9	45.4	56.6	119.5	56.0	177.5
Service, sport and recreation workers—	21.2	74.0	126.4	114.9	336.5	104.6	442.6
Fire brigade men, policemen, protective service, etc. workers	*	14.5	9.1	8.6	35.7	6.7	42.3
Housekeepers, cooks, maids, etc.	8.0	18.1	45.7	46.7	118.5	38.9	157.9
Waiters, bartenders	*	9.0	16.1	10.6	38.6	9.4	48.1
Building caretakers, cleaners	*	6.1	16.6	28.9	52.2	25.9	78.5
Barbers, hairdressers, beauticians, etc.	*	12.6	12.5	*	29.3	6.8	36.1
Launderers, dry cleaners, and pressers	*	*	7.5	4.7	14.5	7.4	22.3
No previous work experience	*	6.9	4.6	*	15.7	*	16.8
Total	755.5	1,333.6	1,235.4	900.6	4,225.0	972.7	5,210.6

(a) For definitions see page 688. See also footnote (a) to first table on page 696. (b) Includes persons with no schooling.

\* Estimates less than 4,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

EMPLOYED PERSONS(a) WHO WORKED MOSTLY AS WAGE AND SALARY EARNERS  
IN 1968, BY INDUSTRY AND FREQUENCY OF PAY, AUSTRALIA  
(’000)

Industry group	Frequency of pay			Total(b)
	Weekly or more often	Fortnightly	Monthly	
Agriculture and other primary	62.9	53.7	54.0	187.7
Mining and quarrying	26.9	30.4	5.6	62.9
Manufacturing	1,160.3	151.2	59.7	1,373.0
Electricity, gas, water and sanitary services	62.4	61.2	*	125.2
Building and construction	257.9	94.2	8.6	362.1
Transport and storage	134.9	106.0	10.3	252.2
Communication	7.8	112.5	*	122.9
Finance and property	61.1	137.5	8.8	209.3
Commerce	718.8	53.3	41.0	818.9
Public authority activities (n.e.i.)	19.7	182.3	*	208.0
Community and business services	171.7	401.6	42.2	631.1
Amusement, hotels, personal service, etc.	271.3	28.7	8.4	312.7
Total	2,955.7	1,412.6	246.3	4,665.9

(a) For definitions see page 688. See also footnote (a) to first table on page 696. (b) Includes 24,800 males and 26,500 females paid at other intervals.

\* Less than 4,000. See footnote \* to table above.

**PERIODS OF LEAVE TAKEN(a) BY EMPLOYED PERSONS(b) WHO WORKED  
MOSTLY AS WAGE AND SALARY EARNERS IN 1968, BY DURATION OF  
LEAVE AND MONTH IN WHICH LEAVE WAS TAKEN, AUSTRALIA**

Month	Leave taken				Total periods		Total weeks	
	One-week periods ('000)	Two-week periods ('000)	Three-week periods ('000)	Four-week periods ('000)	Number ('000)	Per cent of total	Number ('000)	Per cent of total
1968—								
February . . . . .	46.9	54.7	82.6	14.5	198.7	3.9	462.2	4.7
March . . . . .	42.4	49.6	81.8	17.1	190.9	3.8	455.3	4.7
April . . . . .	63.4	51.9	67.0	12.9	195.2	3.8	419.8	4.3
May . . . . .	99.7	80.5	82.5	13.9	276.5	5.5	563.6	5.8
June . . . . .	41.3	36.0	47.5	12.2	136.9	2.7	304.6	3.1
July . . . . .	37.0	34.7	40.9	12.6	125.1	2.5	279.1	2.9
August . . . . .	81.2	84.1	64.2	16.5	245.9	4.8	507.8	5.2
September . . . . .	140.0	96.6	67.8	14.4	318.8	6.3	594.1	6.1
October . . . . .	63.8	59.3	65.9	14.1	203.1	4.0	436.5	4.5
November . . . . .	60.9	59.1	64.0	15.0	199.0	3.9	430.9	4.4
December . . . . .	954.4	378.6	113.0	20.2	1,466.2	28.9	2,131.4	21.8
1969—								
January . . . . .	362.4	760.0	264.8	128.9	1,516.1	29.9	3,192.2	32.6

(a) In the period February 1968 to January 1969. It should be noted that the figures in this table relate to periods of leave taken and are therefore greater than counts of persons who took leave. (b) For definitions see page 688. See also footnote (a) to first table on page 696.

**PERSONS UNEMPLOYED(a) IN 1968, BY AGE, MARITAL STATUS AND NUMBER OF PERIODS  
OF UNEMPLOYMENT, AUSTRALIA**  
( '000)

Number of periods of unemployment	Age group (years)						55 and over	Married	Not married (b)	Total
	15-19	20-24	25-34	35-44	45-54					
MALES										
One . . . . .	45.7	31.0	33.2	23.0	13.8	11.8	75.0	83.7	158.6	
Two . . . . .	7.3	5.1	7.0	4.7	*	*	13.8	14.8	28.5	
Three or more . . . . .	7.5	7.7	8.4	7.9	4.8	6.1	21.5	20.9	42.4	
Total . . . . .	60.6	43.8	48.6	35.6	20.9	20.0	110.2	119.3	229.6	
FEMALES										
One . . . . .	51.8	29.2	27.0	21.5	11.3	*	70.3	74.1	144.4	
Two . . . . .	5.8	4.4	4.0	*	*	*	7.5	10.3	17.8	
Three or more . . . . .	5.4	4.3	*	*	*	*	9.6	8.5	18.1	
Total . . . . .	63.0	37.9	33.9	26.1	14.9	4.6	87.4	92.9	180.3	
PERSONS										
One . . . . .	97.5	60.3	60.2	44.5	25.1	15.5	145.3	157.7	303.0	
Two . . . . .	13.1	9.6	11.0	6.4	*	*	21.3	25.1	46.4	
Three . . . . .	5.0	6.0	4.8	*	*	*	11.0	11.2	22.2	
Four or more . . . . .	7.9	5.9	6.5	7.6	5.7	4.6	20.1	18.2	38.3	
Total . . . . .	123.5	81.7	82.5	61.6	35.9	24.6	197.7	212.3	409.9	

(a) For definitions see page 689. See also footnote (a) to first table on page 696. (b) Never married, widowed and divorced.

\* Less than 4,000. See footnote \* to table on page 698.

**PERSONS UNEMPLOYED(a) IN 1968**  
**PROPORTION OF PERSONS IN THE LABOUR FORCE IN 1968 WHO WERE UNEMPLOYED**  
**AT SOME TIME DURING THE YEAR, BY AGE, AUSTRALIA**  
 (Per cent)

	<i>Age group (years)</i>						<i>55 and over</i>	<i>Total</i>
	<i>15-19</i>	<i>20-24</i>	<i>25-34</i>	<i>35-44</i>	<i>45-54</i>			
Males . . . . .	17.1	9.3	6.2	4.6	3.1	3.4		6.3
Females . . . . .	19.1	10.6	9.8	7.5	5.1	2.7		9.8
Persons . . . . .	18.1	9.9	7.3	5.5	3.7	3.2		7.5

(a) For definitions see page 689. See also footnote (a) to first table on page 696.

**PERSONS UNEMPLOYED(a) IN 1968, BY LEVEL OF SCHOOLING(b) AND**  
**PERIOD OF UNEMPLOYMENT, AUSTRALIA**  
 ('000)

Period of unemployment (weeks)	Completed schooling in Australia						Completed schooling overseas	Total(c)	
	Matri- culated or passed Leaving	Passed Inter- mediate or Junior	Attended secondary school	Attended primary school	Total				
MALES									
1 and under 2 . . . . .	6.6	7.9	7.0	*	24.3	13.7	37.9		
2 and under 4 . . . . .	5.2	12.0	13.7	10.2	41.0	17.1	58.5		
4 and under 8 . . . . .	5.9	10.8	15.5	10.1	42.3	15.7	58.0		
8 and under 13 . . . . .	*	6.5	11.1	10.0	30.6	8.8	39.7		
13 and under 26 . . . . .	*	*	8.4	6.4	19.3	*	23.0		
26 and over . . . . .	*	*	*	4.5	9.9	*	12.5		
Total . . . . .	22.9	41.2	59.5	43.9	167.4	61.3	229.6		
FEMALES									
1 and under 2 . . . . .	6.0	9.9	8.4	5.0	26.8	9.3	36.4		
2 and under 4 . . . . .	6.2	16.8	14.5			10.3	50.4		
4 and under 8 . . . . .	5.2	12.5	10.8	6.9	29.8	10.0	39.9		
8 and under 13 . . . . .			7.4			7.2	5.5	25.8	
13 and under 26 . . . . .	*	*	5.5	*	12.0	*	14.5		
26 and over . . . . .	*	*	4.5	*	10.3	*	13.5		
Total . . . . .	19.5	52.3	51.0	16.4	139.2	40.7	180.3		
PERSONS									
1 and under 2 . . . . .	12.6	17.8	15.4	5.3	51.1	22.9	74.3		
2 and under 4 . . . . .	11.4	28.8	28.2	12.7	81.0	27.5	108.8		
4 and under 8 . . . . .	9.2	23.3	26.3	13.2	72.1	25.7	97.8		
8 and under 13 . . . . .	4.9	13.9	18.3	13.7	50.8	14.3	65.4		
13 and under 26 . . . . .	*	6.5	13.9	8.3	31.3	6.2	37.5		
26 and over . . . . .	*	*	8.4	7.0	20.3	5.5	26.0		
Total . . . . .	42.3	93.5	110.5	60.2	306.6	102.0	409.9		

(a) For definitions see page 689. See also footnote (a) to first table on page 696. (b) In February 1969. (c) Includes persons with no schooling.

\* Less than 4,000. See footnote \* to table on page 698.



## Survey of Leavers from Schools, Universities or other Educational Institutions February 1968, 1969 and 1970

Surveys based on the population survey sample (*see* page 688) have been carried out in February of each year since 1964 in order to obtain information about persons aged 15 to 24 who had attended full time at a school, university or other educational institution at some time during the previous year. Estimates for the years 1964-1967 were given in Year Book No. 54, pages 1162-6.

The main survey questions were designed to distinguish among persons who had attended full time at a school, university or other educational institution at some time in the previous year, those who were intending to return to full-time education and those who were not returning to full-time education, the latter being described in this section as 'leavers'. The scope of the questions was extended in the 1970 survey in order to obtain particulars of the type of educational institution attended during 1969 and the type of institution which persons returning to full-time education would be attending in 1970. Also, for those who had left full-time education, the age at which they left was obtained. The additional information obtained at the 1970 survey is shown in the tables on pages 703-4.

The estimates relate to all persons in the age group 15 to 24 years, except members of the permanent armed forces, national servicemen enlisted in the Regular Army Supplement and certain diplomatic personnel customarily excluded from census and estimated populations. Certain categories of persons covered by the survey were not asked the survey questions. These comprised persons who were patients in hospitals and sanatoria, or inmates of gaols, reformatories, etc., and for whom, for the purposes of this survey, the institution was regarded as their dwelling, and persons reported as permanently unable to work. An estimate of the total number of such persons is shown in the first table in this section.

All persons covered by the survey were asked questions about their occupational status and those in the labour force were further questioned about their occupation and industry. Occupational status is shown for 'leavers', but not for persons returning to full-time education. Although many of these latter persons were in the labour force at the time of the surveys, their numbers would not give a useful indication of the extent of vacation employment because, in the years 1968 to 1970, the 'survey week' extended from the first to the fourth week in February. Hence, between the first and last survey weeks, the level of vacation jobholding would have decreased substantially.

For further details reference should be made to the periodic mimeographed bulletins *Survey of Leavers from Schools, Universities or Other Educational Institutions* (Reference No. 6.9).

### CIVILIANS AGED 15 TO 24 YEARS(a), BY ATTENDANCE OR NON-ATTENDANCE FULL TIME AT A SCHOOL, UNIVERSITY, ETC., IN THE PREVIOUS YEAR AUSTRALIA, FEBRUARY 1968 TO 1970 (<sup>'000</sup>)

	Males			Females			Persons		
	1968	1969	1970	1968	1969	1970	1968	1969	1970
Attended school, university, etc., full time in the previous year(b)—									
Returning to full-time education . . .	214.5	226.8	232.4	162.4	178.4	180.6	376.8	405.2	413.0
Not returning to full-time education ('leavers') . . .	88.5	95.0	95.1	80.8	93.4	91.7	169.4	188.3	186.8
Total who attended school, etc. . .	303.0	321.8	327.5	243.2	271.7	272.3	546.2	593.5	599.8
Did not attend school, university, etc., full time in previous year(b)	690.9	709.0	733.9	739.4	746.1	777.6	1,430.3	1,455.1	1,511.5
In hospitals, etc.(c) . . .	11.5	8.5	9.5	5.7	7.4	4.6	17.2	15.8	14.0
Total persons aged 15 to 24 years	1,005.4	1,039.3	1,070.9	988.3	1,025.2	1,054.5	1,993.7	2,064.5	2,125.4

(a) At the time of the survey. (b) Excludes some patients in hospitals and sanatoria and some inmates of gaols, reformatories, etc., at the time of the survey, and persons permanently unable to work. (c) Estimated numbers of persons within the scope of the survey for whom the hospital, sanatorium, gaol, reformatory, etc. was regarded as their dwelling and persons who were reported as permanently unable to work. Particulars of attendance at schools, etc., were not obtained in respect of such persons.

**'LEAVERS'(a), BY OCCUPATIONAL STATUS: AUSTRALIA**  
**FEBRUARY 1968 TO 1970**  
 ('000)

Occupational status	Males			Females			Persons		
	1968	1969	1970	1968	1969	1970	1968	1969	1970
In the labour force—									
Employed(b) . . .	75.7	81.7	83.9	63.1	73.9	71.8	138.8	155.6	155.7
Unemployed . . .	9.2	8.0	6.8	8.9	9.8	9.4	18.1	17.8	16.2
Total in the labour force . . .	84.8	89.7	90.8	72.1	83.7	81.2	156.9	173.4	171.9
Not in the labour force	*	5.3	4.3	8.8	9.7	10.5	12.5	14.9	14.9
Total 'leavers'(a)	88.5	95.0	95.1	80.8	93.4	91.7	169.4	188.3	186.8

(a) Persons aged 15 to 24 years inclusive at the time of the survey who had attended school, university, etc., full time during the previous year and who were not returning to full-time education. See also notes (b) and (c) to previous table.  
 (b) Includes wage and salary earners, employers, self-employed persons and unpaid family helpers.

\* Estimates less than 4,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can be derived by subtraction, they should not be regarded as reliable.

**'LEAVERS'(a), BY STATES, FEBRUARY 1968 TO 1970**  
 ('000)

State	Males			Females			Persons		
	1968	1969	1970	1968	1969	1970	1968	1969	1970
New South Wales . . .	26.4	34.5	33.3	27.8	31.9	32.1	54.2	66.4	65.4
Victoria . . .	26.3	23.0	24.3	23.9	24.7	23.9	50.1	47.8	48.2
Queensland . . .	14.7	13.4	14.4	10.5	15.0	15.1	25.2	28.5	29.5
South Australia . . .	9.1	10.3	10.9	6.7	9.1	9.1	15.8	19.4	20.0
Western Australia . . .	8.3	9.1	8.6	7.4	8.9	7.1	15.7	18.0	15.7
Tasmania . . .	*	*	*	*	*	*	6.3	5.9	5.6
Australia(b)	88.5	95.0	95.1	80.8	93.4	91.7	169.4	188.3	186.8

(a) See footnote (a) to previous table. (b) Includes the Northern Territory and the Australian Capital Territory.  
 \* See footnote \* to previous table.

**'LEAVERS'(a), BY AGE GROUP AND BY TIME OF LEAVING, AUSTRALIA**  
**FEBRUARY 1968 TO 1970**  
 ('000)

Time of leaving	Males			Females			Persons		
	1968	1969	1970	1968	1969	1970	1968	1969	1970

**PERSONS AGED 15 TO 19 YEARS**

Previous—									
January–June . . .	6.0	7.2	6.5	7.1	11.0	7.8	13.1	18.2	14.3
July–October . . .	9.8	8.1	9.9	10.8	11.8	11.8	20.6	19.9	21.7
November . . .	22.3	31.2	30.9	19.4	29.7	31.0	41.7	60.9	62.0
December(b) . . .	40.9	39.2	38.5	39.0	35.2	36.6	79.9	74.4	75.1
Total(a) . . .	79.0	85.7	85.8	76.3	87.7	87.2	155.3	173.4	172.9

**PERSONS AGED 15 TO 24 YEARS**

Previous—									
January–June . . .	6.3	7.4	6.8	7.2	11.3	8.5	13.5	18.8	15.3
July–October . . .	10.1	9.0	10.2	11.1	12.2	11.9	21.2	21.2	22.1
November . . .	26.3	36.1	37.1	21.6	32.8	33.1	47.9	69.0	70.1
December(b) . . .	45.8	42.4	41.0	41.0	37.0	38.2	86.8	79.4	79.2
Total(a) . . .	88.5	95.0	95.1	80.8	93.4	91.7	169.4	188.3	186.8

(a) See footnote (a) to first table on this page.  
 etc., in January or February of the following year.

(b) Includes a small number of persons who left school, university,

**'LEAVERS'(a), BY AGE, AUSTRALIA, FEBRUARY 1970**  
(<sup>'000</sup>)

<i>Age of leaving (years)(b)</i>	<i>Attended school in 1969</i>			<i>Attended any educational institution(c) in 1969</i>		
	<i>Males</i>	<i>Females</i>	<i>Persons</i>	<i>Males</i>	<i>Females</i>	<i>Persons</i>
14 . . . . .	*	4.3	7.3	*	4.3	7.3
15 . . . . .	29.7	29.2	58.9	29.9	30.0	59.9
16 . . . . .	25.1	22.5	47.6	25.4	26.0	51.4
17 . . . . .	15.2	14.6	29.8	16.4	17.5	33.9
18 . . . . .	7.1	6.1	13.2	8.4	8.1	16.5
19 and over . . . . .	*	*	*	12.0	5.8	17.8
<b>Total . . . . .</b>	<b>82.0</b>	<b>77.5</b>	<b>159.5</b>	<b>95.1</b>	<b>91.7</b>	<b>186.8</b>

(a) See footnote (a) to first table on page 702. (b) Age at time of leaving school, university, etc., not age at time of survey. (c) Includes schools.

\* See footnote \* to first table on page 702.

**PERSONS AGED 15-24 YEARS IN FEBRUARY 1970 WHO ATTENDED FULL TIME AT A  
SCHOOL, UNIVERSITY, ETC., IN 1969, BY TYPE OF INSTITUTION ATTENDED  
AND WHETHER OR NOT RETURNING TO FULL-TIME EDUCATION  
IN 1970, AUSTRALIA**  
(<sup>'000</sup>)

<i>Type of institution attended in 1969</i>						
	<i>School</i>	<i>University</i>	<i>College of advanced education</i>	<i>Technical college</i>	<i>Other</i>	<i>Total</i>
<b>RETURNING TO FULL-TIME EDUCATION IN 1970(a)</b>						
Males . . . . .	191.4	32.0	6.1	*	*	232.4
Females . . . . .	160.0	16.0	*	*	*	180.6
Persons . . . . .	351.4	48.0	7.5	*	*	413.0
<b>NOT RETURNING TO FULL-TIME EDUCATION ('LEAVERS') IN 1970(b)</b>						
Males . . . . .	82.0	7.8	*	*	*	95.1
Females . . . . .	77.5	4.4	*	4.2	4.8	91.7
Persons . . . . .	159.5	12.2	*	5.9	5.7	186.8
<b>TOTAL</b>						
Males . . . . .	273.4	39.8	8.7	*	*	327.5
Females . . . . .	237.5	20.4	*	5.5	6.7	272.3
Persons . . . . .	510.9	60.1	10.9	8.6	9.3	599.8

(a) The type of institution attended in 1970 may differ from that attended in 1969. (b) See footnote (a) to first table on page 702.

\* See footnote \* to first table on page 702.

**PERSONS AGED 15-24 YEARS IN FEBRUARY 1970 WHO WERE RETURNING TO  
FULL-TIME EDUCATION IN 1970, BY TYPE OF INSTITUTION(a), AUSTRALIA**  
(<sup>'000</sup>)

Type of institution attended in 1970(a)									
				School	University	College of advanced education	Technical college	Other	Total
ATTENDED SCHOOL IN 1969									
Males	.	.	.	173.7	10.9	*	*	*	191.4
Females	.	.	.	139.3	6.5	*	6.0	6.5	160.0
Persons	.	.	.	313.1	17.4	5.7	7.9	7.4	351.4
ATTENDED ANY EDUCATIONAL INSTITUTION(b) IN 1969(c)									
Males	.	.	.	173.8	42.8	9.7	*	*	232.4
Females	.	.	.	139.4	22.5	*	7.2	8.1	180.6
Persons	.	.	.	313.3	65.3	13.0	10.1	11.3	413.0

(a) As the survey was conducted in February 1970, the estimates shown will partly reflect expectations as to the institution to be attended. (b) Includes schools. (c) The type of institution attended in 1969 may differ from that attended in 1970.

\* See footnote \* to first table on page 702.

### EMPLOYED WAGE AND SALARY EARNERS

Estimates of wage and salary earners in this issue are based on data derived from the 1966 population census. Because of the adoption of a new definition of the labour force in the 1966 census these estimates are not comparable with those for periods before June 1966.

Detailed industry figures for each State and Australia, on the new basis, and a revised government employment series, have been published in two mimeographed bulletins entitled *Employed Wage and Salary Earners* (Reference No. 6.23), covering the period June 1966 to June 1971. These bulletins contained estimates for each month of the period covered. Estimates for current months are published in *Employment and Unemployment*.

Particulars of the questions asked in the 1966 census in order to determine each person's labour force status are given on pages 685-6. Provided he had not been temporarily laid off by his employer without pay for the whole of the week prior to the census, a person who answered 'yes' to either of the first two of those questions was classified as employed.

The data needed to derive the estimates for periods subsequent to the benchmark date (June 1966) are obtained from three main sources, namely, (a) current pay-roll tax returns; (b) current returns from government bodies; and (c) some other current returns of employment (e.g. for hospitals); the balance, i.e. unrecorded private employment, is estimated. Month-to-month changes shown by current returns are linked to the benchmark data to derive the monthly estimates. At June 1966, recorded employment obtained from the foregoing sources accounted for about 85 per cent of the total number of employees in the industries covered, as determined by the census.

The figures in this section generally relate only to civilian wage and salary earners, not the total labour force. They therefore exclude employers, self-employed persons and unpaid helpers. Also excluded, because of the inadequacy of current data, are employees in agriculture and private domestic service, and some part-time employees. Defence forces are included in the table on page 705.

The June 1966 figures were derived from particulars recorded for individuals on population census schedules, while the estimated monthly changes are derived mainly from reports supplied by employers, relating to enterprises or establishments. Because the two sources differ in some cases in the reporting of industry, the industry dissection of the census totals has been adjusted to conform as closely as possible to an establishment reporting basis. For this reason, and because crews of overseas ships were excluded from the benchmark figures, the estimates for June 1966 in this chapter differ from those published in the series of census bulletins (Nos. 1. 6, 2. 6, etc.) which show particulars of the occupational status and industry of the population in each State and Territory, and in other publications which contain population census results. The industry classification used throughout the series is that of the population census of June 1966.



Current data supplied by reporting enterprises or establishments generally refer to persons on the pay-roll for the last pay-period in each month. Persons who are on paid leave or who work during part of the pay-period and are unemployed or on strike during the rest of the period are generally counted as employed. Those not shown on employers' pay rolls because they are on leave without pay, on strike or stood down for the entire period are excluded.

Prior to 1 September 1971, pay-roll tax returns were lodged by all employers paying more than \$400 a week in wages (other than certain Commonwealth Government bodies, religious and benevolent institutions, public hospitals and other similar organisations specifically exempted under the Payroll Tax Assessment Act 1941-69). Since that date, when the authority for collection of pay-roll tax passed from the Commonwealth to the States, State and local government bodies not engaged in business activity have generally been exempted.

Particulars of employment obtained from other collections, such as the annual manufacturing census and censuses and sample surveys of retail establishments, are used to check and where desirable to revise estimates in relevant sections. Some figures are subject to further revision as the results of later censuses and surveys become available.

Although the series measure reasonably well the short-term trends in employment in the defined field, they may be less reliable for longer-term measurement. There are conceptual differences between benchmark and pay-roll data, and changes in such factors as labour turnover, multiple jobholding and part-time working all affect the trend over longer periods.

### Total civilian employees and defence forces

#### WAGE AND SALARY EARNERS IN EMPLOYMENT, BY SEX: AUSTRALIA JUNE 1966 TO JUNE 1971

EXCLUDING EMPLOYEES IN AGRICULTURE AND PRIVATE DOMESTIC SERVICE  
(\*000)

	June 1966	June 1967	June 1968	June 1969	June 1970	June 1971
MALES						
Civilian employees—						
Private . . . . .	1,865.4	1,891.9	1,945.1	2,014.9	2,085.7	2,145.1
Government(a) . . . . .	746.8	758.7	780.2	790.0	803.7	817.3
Total . . . . .	2,612.2	2,650.6	2,725.3	2,804.9	2,889.4	2,962.4
Defence forces(b) . . . . .	64.2	74.8	78.1	80.8	81.5	80.5
Total . . . . .	2,676.4	2,725.4	2,803.4	2,885.7	2,970.9	3,042.9
FEMALES						
Civilian employees—						
Private . . . . .	975.0	1,023.3	1,064.6	1,110.7	1,177.0	1,226.1
Government(a) . . . . .	216.3	228.4	239.9	256.1	275.4	291.5
Total . . . . .	1,191.3	1,251.7	1,304.5	1,366.8	1,452.4	1,517.6
Defence forces(b) . . . . .	2.5	2.5	2.7	2.7	2.7	2.7
Total . . . . .	1,193.8	1,254.2	1,307.2	1,369.5	1,455.1	1,520.3
PERSONS						
Civilian employees—						
Private . . . . .	2,840.3	2,915.3	3,009.8	3,125.6	3,262.7	3,371.2
Government(a) . . . . .	963.2	987.0	1,020.0	1,046.1	1,079.1	1,108.8
Total . . . . .	3,803.5	3,902.3	4,029.8	4,171.7	4,341.8	4,480.0
Defence forces(b) . . . . .	66.6	77.3	80.8	83.5	84.2	83.2
Total . . . . .	3,870.1	3,979.6	4,110.6	4,255.2	4,426.0	4,563.2

(a) Includes employees, within Australia, of government authorities (Commonwealth, State, local, and semi-government) on services such as railways, tramways, banks, post office, air transport, education (including universities), broadcasting, television, police, public works, factories and munitions establishments, departmental hospitals and institutions, migrant hostels, etc., as well as administrative employees. See pages 707-8. (b) Permanent defence forces in Australia and overseas. Includes national servicemen enlisted in the Regular Army Supplement.

## Civilian employees

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT  
BY INDUSTRY GROUP AND SEX: AUSTRALIA, JUNE 1966 TO JUNE 1971EXCLUDING DEFENCE FORCES AND EMPLOYEES IN AGRICULTURE AND PRIVATE DOMESTIC SERVICE  
(<sup>'000</sup>)

Industry group	June 1966	June 1967	June 1968	June 1969	June 1970	June 1971
MALES						
Mining and quarrying . . . .	50.9	52.4	55.2	59.5	65.0	69.4
Manufacturing . . . . .	950.3	961.6	980.1	1,002.5	1,021.1	1,034.9
Electricity, gas, water and sanitary services . . . . .	98.6	101.0	103.2	104.3	105.2	106.7
Building and construction . . . .	334.0	325.9	336.1	344.3	352.2	361.4
Transport and storage . . . . .	203.2	203.7	208.2	211.9	218.2	222.8
Communication . . . . .	80.4	83.6	86.3	87.7	90.4	92.2
Finance and property . . . . .	98.8	102.6	106.5	112.5	118.6	123.4
Retail trade . . . . .	192.6	196.1	200.2	204.0	209.9	214.7
Wholesale and other commerce . . .	192.6	194.8	197.9	203.4	208.0	209.7
Public authority activities (n.e.i.) .	110.6	116.3	121.4	126.8	132.1	137.7
Health, hospitals, etc. . . . .	38.6	39.9	41.4	43.0	44.9	47.5
Education . . . . .	79.7	82.8	88.2	92.8	97.3	102.7
Amusement, hotels, cafes, personal service, etc. . . . .	84.2	89.8	95.0	101.7	108.4	115.4
Other(a) . . . . .	97.8	100.1	105.6	110.6	118.1	123.9
Total . . . . .	2,612.2	2,650.6	2,725.3	2,804.9	2,889.4	2,962.4
FEMALES						
Mining and quarrying . . . . .	2.2	2.6	2.8	3.3	4.2	4.8
Manufacturing . . . . .	312.8	321.5	329.9	342.1	355.9	357.4
Electricity, gas, water and sanitary services . . . . .	7.2	7.2	7.5	7.9	8.2	8.5
Building and construction . . . .	11.9	12.1	13.4	14.6	16.0	17.6
Transport and storage . . . . .	22.5	23.2	24.0	25.2	27.1	28.4
Communication . . . . .	23.4	24.6	24.9	25.4	26.5	27.4
Finance and property . . . . .	71.5	75.2	78.6	83.1	90.2	94.1
Retail trade . . . . .	195.9	208.6	214.5	219.7	229.0	235.5
Wholesale and other commerce . . .	72.7	73.7	76.6	79.8	83.9	86.7
Public authority activities (n.e.i.) .	46.5	49.9	52.0	55.4	60.2	63.2
Health, hospitals, etc. . . . .	142.3	149.1	156.7	165.6	177.4	191.2
Education . . . . .	105.1	111.4	119.9	128.7	137.8	148.5
Amusement, hotels, cafes, personal service, etc. . . . .	114.7	125.8	133.7	140.3	153.1	165.2
Other(a) . . . . .	62.5	66.9	70.0	75.9	83.0	88.9
Total . . . . .	1,191.3	1,251.7	1,304.5	1,366.8	1,452.4	1,517.6
PERSONS						
Mining and quarrying . . . . .	53.2	54.9	58.0	62.8	69.2	74.2
Manufacturing . . . . .	1,263.1	1,283.1	1,310.0	1,344.6	1,377.0	1,392.4
Electricity, gas, water and sanitary services . . . . .	105.8	108.2	110.7	112.1	113.4	115.1
Building and construction . . . .	345.9	338.0	349.5	358.9	368.2	379.0
Transport and storage . . . . .	225.7	226.8	232.2	237.1	245.3	251.2
Communication . . . . .	103.8	108.1	111.2	113.0	117.0	119.6
Finance and property . . . . .	170.3	177.7	185.1	195.6	208.8	217.6
Retail trade . . . . .	388.5	404.6	414.7	423.7	438.8	450.2
Wholesale and other commerce . . .	265.2	268.6	274.6	283.2	291.9	296.4
Public authority activities (n.e.i.) .	157.2	166.2	173.4	182.1	192.3	200.9
Health, hospitals, etc. . . . .	180.9	189.0	198.1	208.6	222.3	238.7
Education . . . . .	184.7	194.2	208.1	221.5	235.1	251.3
Amusement, hotels, cafes, personal service, etc. . . . .	198.9	215.7	228.6	241.9	261.5	280.6
Other(a) . . . . .	160.3	167.0	175.6	186.5	201.1	212.7
Total . . . . .	3,803.5	3,902.3	4,029.8	4,171.7	4,341.8	4,480.0

(a) Comprises forestry, fishing and trapping; law, order and public safety; religion and social welfare; and other community and business services.

**WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT, BY SEX  
STATES AND TERRITORIES, JUNE 1966 TO JUNE 1971**

EXCLUDING DEFENCE FORCES AND EMPLOYEES IN AGRICULTURE AND PRIVATE DOMESTIC SERVICE  
(<sup>'000</sup>)

June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.(a)	Aust.
<b>MALES</b>									
1966 . .	989.5	735.7	342.2	242.8	181.0	81.6	12.8	26.6	2,612.2
1967 . .	1,002.7	747.7	345.1	245.7	184.2	83.2	13.8	28.0	2,650.6
1968 . .	1,025.4	763.5	354.6	254.0	197.0	84.7	15.6	30.5	2,725.3
1969 . .	1,052.2	782.2	366.6	261.6	206.4	86.5	17.2	32.2	2,804.9
1970 . .	1,083.3	802.2	378.0	266.6	216.2	88.5	19.3	35.3	2,889.4
1971 . .	1,108.2	814.2	390.7	271.7	229.1	89.1	21.2	38.3	2,962.4
<b>FEMALES</b>									
1966 . .	456.1	361.2	139.8	106.1	76.3	33.8	4.9	13.2	1,191.3
1967 . .	480.4	376.5	147.3	109.8	82.3	35.5	5.5	14.4	1,251.7
1968 . .	497.2	388.2	154.0	116.2	89.3	37.1	6.4	16.1	1,304.5
1969 . .	518.4	405.8	160.7	121.4	97.3	38.1	7.2	18.1	1,366.8
1970 . .	550.1	425.7	171.3	129.9	107.5	39.3	8.1	20.6	1,452.4
1971 . .	571.6	441.1	182.3	136.3	114.8	40.5	8.7	22.4	1,517.6
<b>PERSONS</b>									
1966 . .	1,445.6	1,096.9	482.0	348.9	257.3	115.4	17.7	39.8	3,803.5
1967 . .	1,483.1	1,124.2	492.4	355.5	266.5	118.7	19.3	42.4	3,902.3
1968 . .	1,522.6	1,151.7	508.6	370.2	286.3	121.8	22.0	46.6	4,029.8
1969 . .	1,570.6	1,188.0	527.3	383.0	303.7	124.6	24.4	50.3	4,171.7
1970 . .	1,633.4	1,227.9	549.3	396.5	323.7	127.8	27.4	55.9	4,341.8
1971 . .	1,679.8	1,255.3	573.0	408.0	343.9	129.6	29.9	60.7	4,480.0

(a) Includes persons employed in the Australian Capital Territory who reside in adjoining areas.

**Government employees**

The numbers of civilian employees of Commonwealth, State and local government authorities in each State and Territory at June 1971 are shown in the following table. These include employees within Australia of government authorities on services such as railways, tramways, banks, post office, air transport, education (including universities), broadcasting, television, police, public works, factories and munitions establishments, departmental hospitals and institutions, migrant hostels, etc., as well as administrative employees.

**CIVILIAN EMPLOYEES OF GOVERNMENT AUTHORITIES, BY SEX  
STATES AND TERRITORIES, JUNE 1971  
(<sup>'000</sup>)**

State or Territory	Commonwealth Government(a)			State Government(a)			Local Government			Total(a)		
	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons
New South Wales . .	82.4	28.5	111.0	165.0	68.7	233.7	44.8	6.1	50.9	292.2	103.3	395.5
Victoria . .	69.0	22.3	91.3	122.6	46.1	168.7	16.6	3.5	20.1	208.1	71.9	280.0
Queensland . .	25.4	8.3	33.7	72.0	23.9	95.9	18.1	1.7	19.8	115.5	33.9	149.4
South Australia . .	22.7	6.1	28.8	50.3	24.8	75.1	4.3	0.8	5.1	77.3	31.7	108.9
Western Australia . .	14.7	5.1	19.7	47.7	18.7	66.5	5.6	1.0	6.7	68.0	24.8	92.9
Tasmania . .	5.2	1.7	6.9	18.4	7.0	25.4	2.4	0.3	2.8	26.1	9.0	35.1
Northern Territory . .	7.1	3.1	10.2	..	..	..	0.1	..	0.1	7.2	3.1	10.3
Australian Capital Territory . .	23.0	13.7	36.7	..	..	..	..	..	..	23.0	13.7	36.7
<b>Australia . .</b>	<b>249.5</b>	<b>88.8</b>	<b>338.2</b>	<b>476.0</b>	<b>189.2</b>	<b>665.2</b>	<b>91.9</b>	<b>13.4</b>	<b>105.4</b>	<b>817.3</b>	<b>291.5</b>	<b>1,108.8</b>

(a) Includes semi-government authorities. See explanation above.



**CIVILIAN EMPLOYEES OF GOVERNMENT AUTHORITIES, BY SEX: AUSTRALIA  
JUNE 1966 TO JUNE 1971**

('000)

June—	Commonwealth Government(a)			State Government(a)			Local Government			Total(a)		
	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons	Males	Fe- males	Per- sons
1966 . . . . .	214.2	67.3	281.5	443.6	138.5	582.2	89.0	10.5	99.5	746.8	216.3	963.2
1967 . . . . .	223.6	71.6	295.2	446.9	145.7	592.5	88.2	11.1	99.3	758.7	228.4	987.0
1968 . . . . .	230.7	74.7	305.4	457.5	153.4	610.9	92.1	11.7	103.8	780.2	239.9	1,020.0
1969 . . . . .	236.2	79.4	315.7	463.2	164.2	627.5	90.6	12.4	103.0	790.0	256.1	1,046.1
1970 . . . . .	243.9	85.5	329.4	467.7	177.1	644.8	92.1	12.8	104.8	803.7	275.4	1,079.1
1971 . . . . .	249.5	88.8	338.2	476.0	189.2	665.2	91.9	13.4	105.4	817.3	291.5	1,108.8

(a) Includes semi-government authorities. See explanation on page 707.

### COMMONWEALTH EMPLOYMENT SERVICE

Statutory warrant for the Commonwealth Employment Service (C.E.S.) is to be found in the *Re-establishment and Employment Act 1945-1966* (sections 47 and 48). In brief, the main functions of the C.E.S. are to assist people seeking employment to obtain positions best suited to their training, experience, and qualifications; and to assist employers seeking labour to obtain employees best suited to their needs. The organisation and functions of the C.E.S. conform to the provisions of the Employment Service Convention, 1948, of the International Labour Organisation, which was ratified by Australia in December 1949. In addition, C.E.S. practices accord substantially with the provisions of the I.L.O. Employment Service Recommendation, 1948.

The C.E.S. functions on a decentralised basis with the Employment and Training Division of the Department of Labour and National Service. The Central Office is in Melbourne and there is a Regional Office in the capital city of each State. There are 160 District Employment Offices and Branch Offices in suburban and the larger provincial centres and 329 agents in the smaller country centres. The District Employment Offices and Branch Offices are distributed as follows: New South Wales, 56; Victoria, 39; Queensland, 26; South Australia, 15; Western Australia, 16; Tasmania, 5; Northern Territory, 2; Australian Capital Territory, 1.

Specialised facilities are provided for young people, persons with physical and mental handicaps, ex-members of the defence forces, national service dischargees, migrants, rural workers, and persons with professional and technical qualifications. The C.E.S. provides vocational guidance free of charge in all States and has a staff of qualified psychologists for this function. Guidance is available to any person, but is provided particularly for young people, ex-servicemen and the handicapped. In New South Wales the C.E.S. provides vocational guidance to adults, including ex-servicemen and the handicapped, while the State Department of Labour and Industry provides a vocational guidance service within the school system and for young persons leaving school.

All applicants for unemployment benefits under the *Social Services Act 1947-1971* must register at a District Office or agency of the C.E.S., which is responsible for certifying whether or not suitable employment can be offered to them. The C.E.S. is responsible for placing in employment migrant workers sponsored by the Commonwealth under the Commonwealth Nomination and similar schemes. This includes arranging for them to move to their initial employment and for their admission, if necessary, to Commonwealth migrant hostels. Assistance in obtaining employment is provided to other migrants as required. From the inception of the various free and assisted schemes, including the Displaced Persons Scheme, to the end of June 1971, about 281,000 migrant workers had been placed in initial employment by the C.E.S. Since 1951 it has been responsible for recruiting Australian experts for overseas service under the Colombo Plan and the United Nations Expanded Programme of Technical Assistance (now replaced by the U.N. Development Programme). The principal spheres in which experts have been supplied are agriculture, education, engineering, geology, health, and economic and scientific research and development.

In association with placement activities, regular surveys of the labour market are carried out and detailed information is supplied to interested Commonwealth and State Government departments and instrumentalities and to the public. Employers, employees and other interested persons are advised on labour availability and employment opportunities in various occupations and areas and on other matters concerning employment.

The Service completed its twenty-fifth year of operation in May 1971. During 1970 there were 1,124,903 applicants who registered for employment, of whom 870,148 were referred to employers and 493,969 placed in employment. New vacancies notified numbered 734,646.



**Persons registered for employment**

The following table shows the number of persons who claimed, when registering for employment with the Commonwealth Employment Service, that they were not employed and who were recorded as unplaced. The figures include those persons who were referred to employers and those who may have obtained employment without notifying the C.E.S. They include persons in receipt of unemployment benefit (*see* the chapter Welfare Services).

**PERSONS REGISTERED FOR EMPLOYMENT WITH  
COMMONWEALTH EMPLOYMENT SERVICE: STATES, JUNE 1966 TO JUNE 1971**

(Source: Department of Labour and National Service)

<i>June(a)</i>	<i>N.S.W.(b)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(c)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
1966 . . . .	22,837	14,026	9,735	7,357	3,370	1,695	59,020
1967 . . . .	24,957	16,152	13,025	8,484	3,757	2,116	68,491
1968 . . . .	20,808	19,595	10,252	8,359	4,151	2,088	65,253
1969 . . . .	18,277	13,254	10,908	6,300	4,007	2,120	54,866
1970 . . . .	16,527	13,008	8,585	6,360	5,147	1,888	51,515
1971 . . . .	21,609	17,878	9,412	7,975	6,683	2,682	66,239

(a) Generally at Friday nearest end of month.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

**Job vacancies**

The following table shows the number of vacancies registered with the Commonwealth Employment Service. The figures refer to vacancies which employers claimed were available immediately or would be available by the end of the following calendar month.

**VACANCIES REGISTERED WITH COMMONWEALTH EMPLOYMENT SERVICE  
STATES, JUNE 1966 TO JUNE 1971**

(Source: Department of Labour and National Service)

<i>June(a)</i>	<i>N.S.W.(b)</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.(c)</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
1966 . . . .	10,734	13,751	3,239	1,507	2,965	825	33,021
1967 . . . .	10,384	11,459	2,345	1,342	2,411	1,394	29,335
1968 . . . .	11,416	9,411	2,605	1,591	2,630	1,069	28,722
1969 . . . .	14,053	11,777	2,057	2,561	3,786	762	34,996
1970 . . . .	17,674	12,326	3,240	2,495	3,206	924	39,865
1971 . . . .	13,623	9,228	3,305	2,596	2,340	679	31,771

(a) Generally at Friday nearest end of month.

(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.



## CHAPTER 22

# MANUFACTURING INDUSTRY

### Introduction

A complete statistical account of the growth of the manufacturing industry in Australia cannot be given, as the necessary statistics were not collected by the several States on a definite and uniform basis prior to 1906. A series of substantially uniform statistics exist from that time up until 1967-68, when the framework within which manufacturing industry statistics were collected, was changed. Manufacturing statistics for the latest years for which they are available commence on page 716.

An historical summary of the development of the manufacturing industry in Australia since 1901 is contained in earlier issues of the Year Book (*see* No. 51, pages 143-4).

### Decentralisation of manufacturing industries

The decentralisation of secondary industries, and the steps taken by Commonwealth and State Governments towards its development, are referred to in previous issues of the Year Book (*see* No. 51, page 144).

### Bounties on manufacture

Bounties are paid by the Commonwealth Government to encourage local manufacture of certain products. The statutory provisions usually fix a term of operation of the bounty, provide for payment at a rate varying according to changes in the corresponding customs duty, specify the annual maximum amount of bounty payable, and require the bounty to be withheld or reduced if a manufacturer's net profit in production of the commodity exceeds a certain rate, or if rates of wages and conditions of employment in production of the commodity do not conform to prescribed standards. (*See* Chapter 18, Public Finance for products on which bounties are paid.)

### Standardisation

*The Commonwealth Scientific and Industrial Research Organization* has functions concerned with the improvement of efficiency in industrial operations. For further particulars *see* the chapter Education, Cultural Activities, and Research of this Year Book.

*The Standards Association of Australia* is the organisation responsible for industrial standardisation on a national basis. It issues Australian standards for materials and products and standard codes of practice.

Formed as the Australian Commonwealth Engineering Standards Association in 1922, it was reconstituted as the Standards Association of Australia in 1929, and was incorporated by Royal Charter in 1950. It is an independent body having the full recognition and support of the Commonwealth and State Governments and of industry. Approximately half its funds are provided by Commonwealth Government grant, the remainder coming primarily from membership subscriptions and from sale of publications. Organisations, companies, and individuals are eligible for subscribing membership.

The Association is controlled by a Council comprising representatives from Commonwealth and State Governments and their departments, from associations of manufacturing and commercial interests, and from professional institutions. Standards are prepared by committees composed of expert representatives from the interests associated with the subjects under consideration. This assistance is on a voluntary basis.

Preparation of standards is undertaken in response to requests from industrial associations or firms or from government departments. Standards may relate to one or more of several aspects of industrial practice such as terminology, test methods, dimensions, specifications of performance and quality of products, and safety or design codes. In general, standards derive authority from voluntary adoption based on their intrinsic merit, but in special cases where safety of life or property is involved, they may have compulsory application through statutory reference.

The Association is the owner of a registered certification trade mark covering conformity of products to standards. Manufacturers of products covered by Australian standards may obtain a licence to use the Australian Standard Mark, under conditions established by the Association.

The Association has international affiliations and is a member, representing Australia, of the International Organization for Standardization (ISO) and of the International Electrotechnical Commission (IEC). Close links are maintained with overseas standards organisations, and the Association acts as Australian agent for the procurement of ISO and IEC publications and the standards of other countries.

The Association has two specialised libraries, one in Sydney and one in Melbourne, containing the national standards of all countries with standards organisations. These libraries provide necessary material for committee work and a free information service to those concerned with standards.

The headquarters office of the Association is in Sydney, and there is a major branch office in Melbourne. Branch offices are located also in other capital cities and at Newcastle, New South Wales.

*The National Association of Testing Authorities* organises testing facilities throughout Australia to serve private and governmental needs.

Membership is open to authorities whose testing laboratories conform to the standards of staffing and operation defined by the Association. Testing authorities may register their laboratories voluntarily. The Association assesses the competence of the laboratories and ensures that their standards of competence are maintained. Certificates of test issued by registered laboratories may be endorsed in the name of the Association. NATA endorsed test certificates are generally accepted by governmental, industrial and commercial interests.

Laboratories are registered for performance of specific tests in the fields of metrology, mechanical testing, electrical testing, optics and photometry, non-destructive testing, heat and temperature measurement, chemical testing, biological testing, and acoustic and vibration measurement. In June 1970 766 laboratories held NATA registration. A further 52 laboratories had been nominated for registration.

*The Industrial Design Council of Australia* was established in June 1958 for the purpose of encouraging better design in Australian-made goods and fostering an appreciation of good design throughout the community. The Council is fully representative of industry, commerce and government, together with designers and educationists. Its activities are financed by donations from industry and commerce, and by Commonwealth and State grants. IDCA has established Australian design centres in Adelaide, Melbourne and Sydney. These centres display Australian products of approved design and present changing exhibitions relating to design in manufactured articles. IDCA is also responsible for the Australian Design Index which provides a detailed, illustrated record of well-designed Australian products.

The Design Delegate scheme enables regular contact to be maintained with senior executives of manufacturing companies, departmental officers and designers wishing to participate actively in IDCA's programme of lectures, information, and guidance on all aspects of industrial design. Services to design delegates are administered by IDCA through its design centres.

A Record of Designers has been set up to register information about industrial designers and their work. The Council, which has its headquarters in Melbourne, is also concerned with raising the standard of training in industrial design in co-operation with education authorities. For further particulars see Year Book No. 51, page 145.

#### **Overseas participation in Australian manufacturing industry**

For further particulars, see Year Book No. 51, pages 143-4.

### **Manufacturing industry statistics**

As mentioned on page 711, the manufacturing census was changed in respect of 1968-69, as a result of which statistics for that year are not directly comparable with previous years, details of which are given on page 722.

#### **Manufacturing Census, 1968-69**

For the year ended June 1969, the Censuses of Manufacturing and Electricity and Gas were conducted for the first time on an integrated basis with Censuses of Mining, Retail Trade and Selected Services, and Wholesale Trade. The electricity and gas industries, which were previously included in the Annual Factory Census, were the subject of separate censuses in 1968-69, details of which are given on page 720. The integration of these economic censuses was designed to increase substantially



the usefulness and comparability of economic statistics collected and published by the Bureau and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates.

The economic censuses of Manufacturing, Mining and Retail Trade previously conducted in Australia were originally designed and subsequently developed primarily to provide statistics for particular industries on a basis which would best suit the requirements of users interested in statistics of those industries. More recently there has been a growth of interest in statistics describing activity in the economy as a whole—reflected, for example, in the development of employment and earnings statistics, surveys of capital expenditure and stocks and the whole field of national accounts statistics. For such purposes statistics derived from economic censuses in the past have had serious limitations despite the fact that they covered a broad area of the whole economy. Because of the special-purpose nature of each of the censuses, there were no common definitions of data, there was no common system of reporting units, and, as a standard industrial classification was not used for these censuses, industry boundaries were not defined in ways which would avoid overlapping or gaps occurring between the industrial sectors covered. For these reasons, direct aggregation and comparison of statistics from different censuses were not possible.

The integration of these economic censuses meant that for the first time they were being collected on the basis of a common framework of reporting units and data concepts and in accordance with a standard industrial classification. As a result, the statistics for the industries covered by the censuses are now provided with no overlapping or gaps in scope, and in such a way that aggregates for certain important economic data such as value added, employment, wages and salaries, fixed capital expenditure and stocks can be obtained on a consistent basis for all sectors of the economy covered by the censuses.

For the integration of the various censuses it was necessary to undertake three major developments:

- (a) The census units for which the statistics were to be collected (factories, mines, shops, etc.) had to be defined and identified in consistent ways and recorded in a central register, together with identifying data about the businesses owning and operating them.
- (b) A standard industrial classification had to be adopted so that the census units could be classified in consistent ways and to enable the boundaries of the various economic censuses to be determined without gaps or overlapping between them.
- (c) In order to bring the items of data to a consistent basis of definition in all censuses, it was necessary to revise all the forms used in previous censuses.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment), in general, now covers all the operations carried on under the one ownership at a single physical location. The manufacturing establishment is thus one predominantly engaged in manufacturing but the data supplied for it now covers (with a few exceptions) all activities at the location. Previously, the manufacturing establishment covered only a specified manufacturing activity primary to one class of industry. It now covers, in addition, subject to certain exceptions mentioned below:

- (a) Any other manufacturing activity (i.e. production of goods primary to another class of industry).
- (b) Any selling and distribution activities connected with the products manufactured.
- (c) Any non-manufacturing activity (e.g. merchandising of goods not manufactured by the establishment; extraction of raw materials for use by the establishment).

The exceptions in general relate to locations where the subsidiary activities (in terms of gross value) exceed \$1 million, which are treated for statistical purposes as two or more establishments corresponding to the various kinds of activity carried on.

The establishment statistics (other than 'number of establishments') also include data relating to separately located administrative offices and ancillary units serving the establishment and forming part of the business enterprise which owns and operates the establishment. These units were formally excluded from the manufacturing census. They are units such as head offices, storage premises and manufacturers' sales branches or sales offices (except those of the kind which distribute to customers from stocks held by such branches or offices which are treated as establishments in the wholesale census).

The Australian Standard Industrial Classification (ASIC), described in the publication *Australian Standard Industrial Classification (Preliminary Edition) 1969 Vol. 1*, defines the industries in the economy for statistical purposes thus permitting the scope of the different economic censuses to be specified without gaps or overlapping between them. It also sets out standard rules for identifying the statistical units (e.g. establishments) and for coding them to the industries of the classification. This classification is broadly convertible to the International Standard Industrial Classification adopted by the United Nations Statistical Commission. The adoption of the ASIC has resulted in changes in scope between the 1968-69 economic censuses and the individual economic censuses conducted in previous years. The main changes in scope in the manufacturing census, apart from providing for a separate census for electricity and gas, are as follows:

- (a) Establishments mainly engaged in the following activities, previously included in manufacturing census, are excluded in 1968-69: motor vehicle repairs but not engine reconditioning; repair and servicing of agricultural machinery; dry-cleaning, laundering and clothes dyeing services; watch, clock and jewellery repairing; boot and shoe repairing; tyre retreading and repairing; custom dressmaking and tailoring (including clothing repair and alterations); installing and repairing of blinds and awnings, making up and installing of curtains; and repair of domestic appliances. Establishments mainly engaged in these activities are included in the 1968-69 Census of Retail Trade and Selected Services or the Census of Wholesale Trade.
- (b) Establishments mainly engaged in the following activities, previously excluded in most States from manufacturing censuses, are included in 1968-69: slaughtering; milk treatment; and publishing.

An indication of the effect of the above changes arising from the adoption of the new industrial classification, can be gained from the following comparison. In the 1967-68 manufacturing census there were approximately 62,600 manufacturing establishments (excluding electricity and gas establishments) in Australia. Of these, approximately 38,400 would have been included in the 1967-68 census if ASIC had been used. This decreased of 24,200 in the number of manufacturing establishments is due to the exclusion from the manufacturing census of the establishments referred to in the preceding paragraph. Figures for the individual States and Territories are shown in the following table.

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number of manufacturing establishments in the 1967-68 census	24,800	18,000	6,100	6,200	5,300	1,800	180	240	62,600
Approximate number of manufacturing establishments that would have been in the 1967-68 census if ASIC had been used	14,600	12,500	4,200	3,200	2,600	1,000	70	130	38,400

In the 1968-69 census, the number of manufacturing establishments was about 38,800, representing a net increase of about 400 over the adjusted number for 1967-68. This increase is accounted for by the inclusion of establishments not formerly in the manufacturing census, together with the difference between the number of establishments which commenced operations during 1968-69 and the number which ceased operations during 1967-68.

The third step in integrating the censuses, whereby the items of data on the census forms were standardised for all census sectors, has meant changes in the content of the statistics. For example, the value of 'turnover' is now collected instead of the value of output at the factory, and purchases and selected expenses are collected as well as the value of specified materials, fuels, etc. used. However the underlying concept of 'value added', is similar to the former concept 'value of production', even though its method of derivation is different. Value added, the basic measure of the establishment's contribution to total production, is now calculated as turnover\* less purchases and transfers in (from other establishments of the enterprise), plus increase (or less decrease) in stocks. In the past the corresponding item, value of production, was obtained by deducting the value of materials, fuels, etc. used from the value of output at the factory. A detailed comparison of the method of derivation is shown in the following table.

\* In this section 'sales, transfers out and other operating revenue' appears instead of 'turnover', as two components of turnover have been omitted from the preliminary statistics which are shown for 1968-69. These are 'capital work done for own use' and 'bounties and subsidies on production'.

<i>Value of production</i> 1967-68	<i>Value added</i> 1968-69
Selling value at works, exclusive of all delivery costs or changes, of goods manufactured, treated or worked up during the year, including by-products, <i>plus</i> Value of other work done, . . . such as repairing and making up for customers, etc.	Sales, and transfers out (to other establishments of the enterprise), of goods manufactured by the establishment, <i>plus</i> Sales and transfers out of goods not manufactured by the establishment, <i>plus</i> Bounties and subsidies on production(a), <i>plus</i> All other operating income, <i>plus</i> Capital work done for own use, or for rental or lease(a)
<i>Equals:</i> Value of output	<i>Equals:</i> Value of turnover <i>Plus:</i> Value of stocks at 30 June 1969 <i>Less:</i> Value of stocks at 30 June 1968
<i>Less—</i> Value of materials used Power, fuel and light used Water used Lubricating oils used Repairs, etc. Containers used	<i>Less—</i> Purchases and transfers in of materials, electricity, fuels, containers, etc. Purchases and transfers in of goods for resale Charges for commission and subcontract work Repair and maintenance expenses Outward freight and cartage, motor vehicle running expenses, sales commission payments
<i>Equals:</i> Value of production	<i>Equals:</i> Value added

(a). Omitted from 1968-69 statistics which are preliminary and subject to revision.

Even though the concept of value added is similar to value of production, direct comparison of 1968-69 and 1967-68 figures will not be possible because of the change in census units already mentioned which has resulted in the value added for the whole establishment being reported, not merely the value added for the manufacturing process. Comparison is also affected, of course, by the change in the scope of the manufacturing census due to the adoption of ASIC.

The statistics in this chapter are preliminary and subject to revision. At this stage, the splitting of locations referred to previously on page 713 has not been completed, the detailed industry classification of establishments has not been carried out, and transfers between establishments of the same enterprise have been valued or reported in returns (in the final publication, some of these transfers will be adjusted to achieve a consistent basis of valuation). For these reasons, only key items of data are presented in this chapter for broad industry groups.

For a more detailed description of the Integrated Economic Censuses reference should be made to Chapter 31, Year Book No. 56.



## Summary of operations

The following table shows the summary of operations for manufacturing establishments.

**MANUFACTURING ESTABLISHMENTS—SUMMARY OF OPERATIONS  
BY INDUSTRY SUB-DIVISION: AUSTRALIA, 1968-69**

Industry sub-division	ASIC code (a)	Number of estab- lish- ments opera- ting during 1968-69	Persons employed(b)			Wages and salaries	Sales, trans- fers out and other opera- ting revenue	Stocks at 30 June		Pur- chases, trans- fers in and selected ex- penses	Value added
			Males	Females	Total			1968	1969		
		No.	No.	No.	No.	\$m	\$m	\$m	\$m	\$m	\$m
Food, beverages and tobacco .	21-2	5,613	142,893	51,160	194,053	567.1	4,202.2	513.4	556.3	3,036.9	1,208.3
Textiles; clothing and footwear .	23, 24	4,488	59,821	121,996	181,817	421.9	1,685.0	307.8	325.5	996.4	706.3
Wood, wood products and furniture .	25	6,653	75,187	11,481	86,668	230.1	954.5	131.7	139.9	557.0	405.6
Paper and paper products, printing .	26	3,834	78,991	30,379	109,370	350.7	1,346.7	177.7	188.7	697.3	660.4
Chemical, petroleum and coal products .	27	1,263	50,238	18,221	68,459	246.8	1,639.0	316.0	312.3	998.6	636.6
Non-metallic mineral products .	28	2,063	51,468	5,485	56,953	190.6	806.6	104.0	112.7	430.6	384.7
Basic metal products .	29	413	78,589	5,152	83,741	317.0	2,070.9	354.2	392.0	1,444.3	664.4
Transport equipment .	32	1,473	131,520	13,601	145,121	462.8	1,987.2	353.2	376.8	1,147.5	863.3
Fabricated metal products; other machinery and equipment .	31, 33	10,697	258,772	70,473	329,245	1,023.8	3,866.7	811.4	892.1	2,225.3	1,721.9
Miscellaneous manufacturing	34	2,337	42,024	22,716	64,740	186.1	790.8	135.1	151.2	469.3	337.6
<b>Total manu- facturing</b>		<b>38,834</b>	<b>969,503</b>	<b>350,664</b>	<b>1,320,167</b>	<b>3,996.9</b>	<b>19,349.7</b>	<b>3,204.6</b>	<b>3,447.4</b>	<b>12,003.2</b>	<b>7,589.0</b>

(a) Australian Standard Industrial Classification.

(b) Includes working proprietors.

## Number of establishments

The following table shows the number of establishments, in each State, which operated during the year 1968-69. These figures relate to manufacturing establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

**MANUFACTURING ESTABLISHMENTS—NUMBER OF ESTABLISHMENTS OPERATING  
DURING 1968-69, BY STATE AND ASIC(a) SUB-DIVISION: STATES AND TERRITORIES**

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco .	21-2	1,634	1,539	1,103	557	528	216	23	13	5,613
Textiles; clothing and footwear .	23, 24	1,827	2,133	230	165	107	26	..	..	4,488
Wood, wood products and furniture .	25	2,252	1,724	1,028	558	591	461	5	34	6,653
Paper and paper products, printing .	26	1,568	1,430	301	253	197	55	4	26	3,834
Chemical, petroleum and coal products .	27	611	372	90	101	75	14	..	..	1,263
Non-metallic mineral products .	28	728	575	230	224	215	60	18	13	2,063
Basic metal products .	29	187	98	61	35	22	10	..	..	413
Transport equipment .	32	515	441	192	149	148	28	..	..	1,473
Fabricated metal products; other machinery and equipment .	31, 33	4,451	3,451	893	974	728	153	21	26	10,697
Miscellaneous manufacturing	34	1,032	724	186	208	163	16	4	4	2,337
<b>Total manufacturing</b>		<b>14,805</b>	<b>12,487</b>	<b>4,314</b>	<b>3,224</b>	<b>2,774</b>	<b>1,039</b>	<b>75</b>	<b>116</b>	<b>38,834</b>

(a) Australian Standard Industrial Classification.



## Employment

The statistics on the number of persons employed shown in the following table relates to working proprietors at end of June 1969 and employees on the payroll of the last pay period in June 1969, including those working at separately located administrative offices and ancillary units in the State.

It should be noted that persons employed in each State (and their wages and salaries) relate to those employed at establishments, administrative offices or ancillary units located in that State, even though the administrative offices or ancillary units may have served establishments located in another State.

**MANUFACTURING ESTABLISHMENTS—MALES, FEMALES AND PERSONS EMPLOYED  
BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES, 1968-69**

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>MALES EMPLOYED</b>										
Food, beverages and tobacco .	21-2	47,808	42,155	27,316	11,183	9,188	4,687	298	258	142,893
Textiles; clothing and footwear	23, 24	19,995	32,223	2,358	2,596	850	1,799	..	..	59,821
Wood, wood products and furniture .	25	26,085	18,708	11,801	6,744	7,171	4,320	153	205	75,187
Paper and paper products, printing .	26	30,996	26,513	6,839	5,035	3,850	4,814	82	862	78,991
Chemical, petroleum and coal products .	27	22,771	17,822	2,525	2,939	2,878	1,303	..	..	50,238
Non-metallic mineral products	28	20,973	13,964	5,718	3,987	5,086	1,239	177	324	51,468
Basic metal products .	29	52,805	6,624	3,175	8,749	3,339	3,897	..	..	78,589
Transport equipment .	32	42,216	47,855	11,312	24,424	4,637	1,076	..	..	131,520
Fabricated metal products; other machinery and equip- ment	31, 33	107,394	89,106	18,940	26,603	13,719	2,369	190	451	258,772
Miscellaneous manufacturing	34	17,128	17,951	2,850	2,809	1,052	101	88	45	42,024
<b>Total manufacturing .</b>		<b>388,171</b>	<b>312,921</b>	<b>92,834</b>	<b>95,069</b>	<b>51,770</b>	<b>25,605</b>	<b>988</b>	<b>2,145</b>	<b>969,503</b>
<b>FEMALES EMPLOYED</b>										
Food, beverages and tobacco .	21-2	17,428	15,664	7,040	4,330	4,027	2,496	82	93	51,160
Textiles; clothing and footwear	23, 24	44,877	62,010	6,778	4,338	1,870	2,123	..	..	121,996
Wood, wood products and furniture .	25	4,445	2,968	1,687	1,062	980	307	4	28	11,481
Paper and paper products, printing .	26	13,102	10,028	2,693	1,797	1,313	1,038	36	372	30,379
Chemical, petroleum and coal products .	27	10,085	6,427	613	613	403	80	..	..	18,221
Non-metallic mineral products	28	2,194	1,998	320	396	462	87	13	15	5,485
Basic metal products .	29	2,995	1,133	270	433	180	141	..	..	5,152
Transport equipment .	32	4,051	7,159	522	1,499	200	170	..	..	13,601
Fabricated metal products; other machinery and equip- ment	31, 33	34,536	23,406	2,654	7,332	2,052	402	24	67	70,473
Miscellaneous manufacturing	34	10,564	9,098	1,037	1,450	539	16	8	4	22,716
<b>Total manufacturing .</b>		<b>144,277</b>	<b>139,891</b>	<b>23,614</b>	<b>23,250</b>	<b>12,026</b>	<b>6,860</b>	<b>167</b>	<b>579</b>	<b>350,664</b>
<b>PERSONS EMPLOYED</b>										
Food, beverages and tobacco .	21-2	65,236	57,819	34,356	15,513	13,215	7,183	380	351	194,053
Textiles; clothing and footwear	23, 24	64,872	94,233	9,136	6,934	2,720	3,922	..	..	181,817
Wood, wood products and furniture .	25	30,530	21,676	13,488	7,806	8,151	4,627	157	233	86,668
Paper and paper products, printing .	26	44,098	36,541	9,532	6,832	5,163	5,852	118	1,234	109,370
Chemical, petroleum and coal products .	27	32,856	24,249	3,138	3,552	3,281	1,383	..	..	68,459
Non-metallic mineral products	28	23,167	15,962	6,038	4,383	5,548	1,326	190	339	56,953
Basic metal products .	29	53,800	7,757	3,445	9,182	3,519	4,038	..	..	83,741
Transport equipment .	32	46,267	55,014	11,834	25,923	4,837	1,246	..	..	145,121
Fabricated metal products; other machinery and equip- ment	31, 33	141,930	112,512	21,594	33,935	15,771	2,771	214	518	329,245
Miscellaneous manufacturing	34	27,692	27,049	3,887	4,259	1,591	117	96	49	64,740
<b>Total manufacturing .</b>		<b>532,448</b>	<b>452,812</b>	<b>116,448</b>	<b>118,319</b>	<b>63,796</b>	<b>32,465</b>	<b>1,155</b>	<b>2,724</b>	<b>1,320,167</b>

(a) Australian Standard Industrial Classification.

**Wages and salaries**

The following table shows wages and salaries of all employees of manufacturing establishments, including those working at separately located administrative offices and ancillary units in the State. Drawings of working proprietors are not included.

**MANUFACTURING ESTABLISHMENTS—WAGES AND SALARIES  
BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES, 1968-69**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	195.5	178.2	94.3	42.2	35.2	19.2	1.4	1.1	567.1
Textiles; clothing and footwear	23, 24	147.7	228.0	16.7	14.7	5.3	9.4	..	..	421.9
Wood, wood products and furniture	25	84.9	60.7	31.5	19.3	21.2	11.3	0.5	0.7	230.1
Paper and paper products, printing	26	143.1	118.7	27.8	20.2	16.0	20.4	0.4	4.0	350.7
Chemical, petroleum and coal products	27	118.2	87.9	10.6	12.8	12.3	5.0	..	..	246.8
Non-metallic mineral products	28	79.7	53.0	18.9	14.3	18.4	4.2	0.8	1.4	190.6
Basic metal products	29	207.6	32.1	13.2	35.1	13.5	15.5	..	..	317.0
Transport equipment	32	154.4	182.2	33.9	74.9	13.8	3.5	..	..	462.8
Fabricated metal products; other machinery and equipment	31, 33	446.7	359.9	60.5	99.7	47.3	7.4	0.7	1.6	1,023.8
Miscellaneous manufacturing	34	79.8	80.6	9.5	11.4	3.8	0.3	0.3	0.4	186.1
<b>Total manufacturing</b>		<b>1,657.7</b>	<b>1,381.3</b>	<b>317.0</b>	<b>344.6</b>	<b>186.8</b>	<b>96.1</b>	<b>4.1</b>	<b>9.3</b>	<b>3,996.9</b>

(a) Australian Standard Industrial Classification.

**Sales, transfers out and other operating revenue**

The following table shows the value of manufacturing establishments' sales, transfers out and other operating revenue. Figures include sales of goods whether produced by the establishment or not, plus transfers out of goods to other establishments of the same enterprise, plus all other operating revenue from outside the enterprise, such as commission, repair and service revenue. This excludes rents, leasing revenue, interest (other than hire purchase), royalties and receipts from the sale of fixed tangible assets.

**MANUFACTURING ESTABLISHMENTS—SALES, TRANSFERS OUT AND OTHER  
OPERATING REVENUE, BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES, 1968-69**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	1,268.9	1,447.3	782.2	295.7	262.4	127.5	12.3	5.9	4,202.2
Textiles; clothing and footwear	23, 24	582.5	931.9	59.6	55.6	18.7	36.7	..	..	1,685.0
Wood, wood products and furniture	25	355.4	251.8	124.7	83.3	83.0	51.9	1.7	2.7	954.5
Paper and paper products, printing	26	539.9	470.2	102.3	78.9	53.6	92.5	0.9	8.4	1,346.7
Chemical, petroleum and coal products	27	803.6	532.6	129.3	69.1	80.2	24.3	..	..	1,639.0
Non-metallic mineral products	28	304.4	236.4	84.0	62.9	89.4	17.4	4.3	7.8	806.6
Basic metal products	29	1,245.5	179.6	203.9	208.5	116.6	116.8	..	..	2,070.9
Transport equipment	32	564.2	832.3	160.7	359.2	61.9	8.9	..	..	1,987.2
Fabricated metal products; other machinery and equipment	31, 33	1,623.4	1,424.2	239.2	356.3	186.2	29.5	3.0	4.9	3,866.7
Miscellaneous manufacturing	34	334.8	351.8	41.9	44.2	15.8	0.6	0.6	1.1	790.8
<b>Total manufacturing</b>		<b>7,622.6</b>	<b>6,658.1</b>	<b>1,927.8</b>	<b>1,613.7</b>	<b>967.8</b>	<b>506.1</b>	<b>22.8</b>	<b>30.8</b>	<b>19,349.7</b>

(a) Australian Standard Industrial Classification.

**Purchases, transfers in and selected expenses**

The following table gives details of the value of purchases, transfers in and selected expenses. Figures include purchases of materials, fuel, power, containers, etc., plus transfers in of goods from other establishments of the enterprise, plus charges for commission and sub-contract work, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses and sales commission payments.

**MANUFACTURING ESTABLISHMENTS—PURCHASES, TRANSFERS IN AND SELECTED EXPENSES, BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES, 1968-69**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco	21-2	883.9	1,072.3	576.9	207.1	194.4	90.1	8.2	4.0	3,036.9
Textiles; clothing and footwear	23, 24	345.2	555.7	35.1	31.1	10.2	19.2	..	..	996.4
Wood, wood products and furniture	25	208.6	148.2	73.9	49.4	44.7	29.9	1.0	1.3	557.0
Paper and paper products, printing	26	278.9	253.5	52.9	37.7	24.5	46.8	0.1	2.7	697.3
Chemical, petroleum and coal products	27	469.8	323.8	90.0	46.2	55.7	13.3	..	..	998.6
Non-metallic mineral products	28	163.3	127.6	45.2	33.0	45.1	8.9	2.4	5.1	430.6
Basic metal products	29	826.1	135.1	155.3	155.7	88.3	83.9	..	..	1,444.3
Transport equipment	32	267.3	522.4	92.8	217.8	43.0	4.2	..	..	1,147.5
Fabricated metal products; other machinery and equipment	31, 33	944.3	814.4	135.3	200.2	110.6	16.3	1.8	2.4	2,225.3
Miscellaneous manufacturing	34	199.6	209.0	25.1	25.5	8.7	0.3	0.2	0.8	469.3
<b>Total manufacturing</b>		<b>4,587.0</b>	<b>4,162.0</b>	<b>1,282.3</b>	<b>1,003.8</b>	<b>625.2</b>	<b>312.8</b>	<b>13.7</b>	<b>16.5</b>	<b>12,003.2</b>

(a) Australian Standard Industrial Classification.

**Stocks**

Statistics on the value of stocks at 30 June 1968 and 1969, are shown in the following table. Figures include all the stocks of materials, fuels, etc., and finished goods and work-in-progress of the establishment whether located at the establishment or elsewhere.

**MANUFACTURING ESTABLISHMENTS—STOCKS AT 30 JUNE 1968 AND 1969**  
**BY INDUSTRY SUB-DIVISION: STATES AND TERRITORIES**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>STOCKS AT 30 JUNE 1968</b>										
Food, beverages and tobacco	21-2	167.6	196.7	61.4	45.4	19.8	21.1	1.1	0.2	513.4
Textiles; clothing and footwear	23, 24	108.3	159.9	9.3	11.5	3.0	15.8	..	..	307.8
Wood, wood products and furniture	25	42.7	34.6	17.4	13.2	11.8	11.5	0.2	0.3	131.7
Paper and paper products, printing	26	66.4	67.1	13.6	9.5	6.3	12.9	0.1	1.8	177.7
Chemical, petroleum and coal products	27	150.4	108.0	20.6	12.2	18.9	5.8	..	..	316.0
Non-metallic mineral products	28	44.4	28.3	10.8	8.7	9.2	2.1	0.2	0.4	104.0
Basic metal products	29	205.6	28.1	39.5	45.6	17.1	18.2	..	..	354.2
Transport equipment	32	101.3	168.0	16.3	58.9	6.7	2.1	..	..	353.2
Fabricated metal products; other machinery and equipment	31, 33	329.8	330.9	45.6	67.0	31.3	5.9	0.4	0.6	811.4
Miscellaneous manufacturing	34	57.4	62.2	6.8	6.2	2.2	0.2	(b)	0.1	135.1
<b>Total manufacturing</b>		<b>1,273.8</b>	<b>1,183.9</b>	<b>241.3</b>	<b>278.3</b>	<b>126.4</b>	<b>95.6</b>	<b>2.0</b>	<b>3.4</b>	<b>3,204.6</b>
<b>STOCKS AT 30 JUNE 1969</b>										
Food, beverages and tobacco	21-2	178.8	213.2	66.1	51.3	22.8	22.5	1.4	0.2	556.3
Textiles; clothing and footwear	23, 24	115.6	167.8	11.8	11.3	3.2	15.9	..	..	325.5
Wood, wood products and furniture	25	45.4	35.6	18.7	14.0	13.6	12.1	0.2	0.2	139.9
Paper and paper products, printing	26	70.3	71.4	14.7	9.6	6.7	13.9	0.1	2.0	188.7
Chemical, petroleum and coal products	27	152.1	105.1	18.6	12.5	18.1	5.9	..	..	312.3
Non-metallic mineral products	28	49.8	28.2	12.4	8.9	10.3	2.4	0.2	0.5	112.7
Basic metal products	29	217.5	31.3	44.7	51.2	21.8	25.4	..	..	392.0
Transport equipment	32	101.3	179.1	17.4	69.4	7.2	2.3	..	..	376.8
Fabricated metal products; other machinery and equipment	31, 33	371.2	360.9	45.8	72.6	34.4	6.0	0.5	0.7	892.1
Miscellaneous manufacturing	34	61.9	69.9	9.2	7.4	2.4	0.3	(b)	0.1	151.2
<b>Total manufacturing</b>		<b>1,363.9</b>	<b>1,262.5</b>	<b>259.5</b>	<b>308.2</b>	<b>140.6</b>	<b>106.7</b>	<b>2.4</b>	<b>3.6</b>	<b>3,447.4</b>

(a) Australian Standard Industrial Classification.

(b) Less than \$50,000.

## Value added

The statistics on value added contained in the following table have been calculated by adding to the value of sales, transfers out and other operating revenue, the increase (or deducting the decrease) in the value of stocks, and deducting the value of purchases, transfers in and selected expenses. A more detailed description of the method of deriving value added is given on page 715.

MANUFACTURING ESTABLISHMENTS—VALUE ADDED, BY INDUSTRY SUB-DIVISION  
STATES AND TERRITORIES, 1968-69  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Food, beverages and tobacco .	21-2	396.2	391.5	210.0	94.5	71.0	38.8	4.4	1.9	1,208.3
Textiles; clothing and footwear	23, 24	244.6	384.1	27.0	24.3	8.7	17.6	..	..	706.3
Wood, wood products and furniture . . . . .	25	149.5	104.6	52.1	34.7	40.1	22.6	0.7	1.3	405.6
Paper and paper products, printing . . . . .	26	264.9	221.1	50.5	41.3	29.5	46.7	0.7	5.9	660.4
Chemical, petroleum and coal products . . . . .	27	335.5	205.9	37.3	23.2	23.7	11.1	..	..	636.6
Non-metallic mineral products	28	146.5	108.7	40.4	30.1	45.4	8.8	1.9	2.8	384.7
Basic metal products . . .	29	431.3	47.7	53.8	58.4	33.0	40.1	..	..	664.4
Transport equipment . . .	32	296.9	321.0	69.0	151.9	19.4	4.9	..	..	863.3
Fabricated metal products; other machinery and equip- ment . . . . .	31, 33	720.5	639.8	104.1	161.7	78.7	13.2	1.3	2.7	1,721.9
Miscellaneous manufacturing	34	139.7	150.5	19.2	19.9	7.3	0.5	0.4	0.2	337.6
<b>Total manufacturing . . .</b>		<b>3,125.6</b>	<b>2,574.7</b>	<b>663.5</b>	<b>639.8</b>	<b>356.8</b>	<b>204.4</b>	<b>9.4</b>	<b>14.7</b>	<b>7,589.0</b>

(a) Australian Standard Industrial Classification.

## Electricity and gas establishments

As mentioned on page 712, the electricity and gas industries, which were previously included in the Annual Factory Census, were the subject of separate censuses in 1968-69. In addition the electricity and gas census has been extended to cover distribution as well as production. The following table shows statistics for each State and Territory, and for Australia for the year 1968-69. Statistics for the electricity and gas supply industries for the years 1963-64 to 1967-68 are included in tables on pages 722-9.

For electricity and gas, the basic census unit is an exception to the general concept of the standardised unit. Because of the nature of the activities of electricity and gas undertakings, the single operating location basis is not suitable. The establishment unit used consists of all locations, including administrative offices and ancillary units, mainly concerned with the production and/or distribution of electricity or gas, operated by the undertaking in the one State. The use of this concept is one of the reasons for the number of electricity and gas establishments in 1968-69 being considerably less than in previous years. The other main reason is that until 1967-68, a number of electricity generating stations operated by enterprises principally for their own use were included. However, in 1968-69, these generating stations were included in the electricity census only if sales and transfers of electricity exceeded \$100,000 in value.



ELECTRICITY AND GAS ESTABLISHMENTS(a), SUMMARY OF OPERATIONS  
STATES AND TERRITORIES, 1968-69

State	Number of establishments operating during 1968-69	Persons employed			Wages and salaries	Sales(b), transfers out and other operating revenue	Stocks at 30 June		Purchases, transfers in and selected expenses	Value added
		Males	Females	Total			1968	1969		
	No.	No.	No.	No.	\$m	\$m	\$m	\$m	\$m	\$m
New South Wales—										
Electricity . . .	52	23,880	2,337	26,217	107.4	506.1	40.6	45.2	269.2	241.5
Gas . . .	34	2,993	487	3,480	12.5	43.4	2.5	3.0	18.0	25.9
Victoria—										
Electricity . . .	14	13,745	1,328	15,073	61.6	265.0	20.8	21.1	84.3	181.0
Gas . . .	8	4,140	621	4,761	18.6	56.6	5.7	6.7	19.5	38.1
Queensland—										
Electricity . . .	22	6,953	428	7,381	27.0	135.3	9.8	10.9	59.4	77.0
Gas . . .	6	426	77	503	1.3	5.9	0.5	0.6	2.4	3.6
South Australia—										
Electricity . . .	19	6,250	362	6,612	24.8	76.2	6.2	6.7	30.0	46.7
Gas . . .										
Western Australia—										
Electricity . . .	58	3,447	264	3,711	12.5	48.2	5.0	6.0	15.0	34.2
Gas . . .										
Tasmania—										
Electricity . . .	5	2,450	194	2,644	10.6	34.8	5.1	4.7	0.9	33.5
Gas . . .										
Northern Territory—										
Electricity . . .	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Gas . . .										
Australian Capital Territory—										
Electricity . . .	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)	(c)
Gas . . .										
Australia—										
Electricity . . .	170	55,994	4,830	60,824	241.9	1,063.8	87.7	94.8	460.0	610.9
Gas . . .	54	8,989	1,327	10,316	37.4	121.2	10.2	11.8	45.2	77.6

(a) Covers production and distribution. (b) In some States electricity is produced by certain undertakings and sold to other undertakings for distribution. In these States sales of electricity are duplicated due to the inclusion of the bulk sales to these distributors. (c) Not available for publication.

## Manufacturing Industry Statistics Prior to 1968-69

Statistics relating to factories prior to 1968-69 were compiled from tabulations made by the Deputy Commonwealth Statisticians in the several States from returns supplied to them annually by manufacturers in accordance with the statistical Acts of the States and the Commonwealth. A return had to be supplied in respect of every *factory*, which was defined for this purpose as an establishment where four or more persons were employed or where power (other than manual) was used in any manufacturing process. This definition included factories in educational and charitable institutions, reformatories, and other public institutions (except penitentiaries), but did not cover smallgoods makers, laundries, photography studios, florists and seedsmen, or most abattoirs.

If a manufacturing business was conducted in conjunction with any other activity, particulars relating to the manufacturing section only were included in the statistics. Where two or more industries were conducted in the same establishment, a separate return was obtained for each industry wherever practicable.

Manufacturers were requested to state in their returns particulars of the number, age, etc., of their employees, salaries and wages paid, the value of premises and equipment, the horse-power of machinery, the value of raw materials (including containers), tools replaced, etc., the values and in most cases the quantities of fuel used, and quantities of values of principal materials used and articles produced. The returns obtained from manufacturers were not intended to show a complete record of the income and expenditure of factories nor to show the profits or losses of factories collectively or individually.

*Persons employed* in the manufacturing activities of the factory only were counted as factory employees. The figures relating to employment therefore included working proprietors as well as out-workers, but *excluded* all those engaged in selling and distribution such as salesmen, travellers, collectors, carters engaged solely on outward delivery of manufactured goods, and retailing storemen.

The *average number of persons* employed was quoted on two different bases, the average during the period of operation and the average over the whole year. Of these, the former was simply the aggregate of the average number of persons employed in each factory during its period of operation (whether the whole or only part of the year). This average was used only in respect of details relating to classification according to the number of persons employed. The latter, which was used in all other instances

was calculated by reducing the average number working in the factories (irrespective of period of operation) to the equivalent number working for a full year.

*Working proprietors* were included in all employment figures other than those relating to monthly employment and age dissections, but salaries and wages paid in all cases excluded drawings by working proprietors.

*Value of materials used* included also the value of stores used, containers, tools replaced, and materials used in repairs to plant.

*Value of fuel, etc., used* included also the cost of power and light used, lubricants and water.

The *value of factory output* was the value of the goods manufactured or their value after passing through the particular process of manufacture concerned, and included the amount received for repair work, work done on commission and receipts for other factory work. The basis of valuation of the output was the selling value of the finished articles at the factory, exclusive of all delivery costs and charges and excise duties, but inclusive of bounty and subsidy payments to the manufacturer. In the special case of government factories and workshops the value of output was, in most cases, estimated by adding ten per cent to the value of materials and fuel used and other factory costs, including salaries and wages paid.

The *value of production* was the value added to materials by the process of manufacture. It was calculated by deducting from the value of factory output the value (at the factory) of the materials used, containers and packing, power, fuel and light used, tools replaced, and materials used in repairs to plant (but not depreciation charges). In the process of manufacture many goods were treated in several industries, the output from one becoming the material for another, so that such commodities were counted more than once in the aggregate value of output and of materials. Examples were raw sugar passing from the mills to the refinery, metals from the smelters which became materials to establishments concerned in the production of metal goods, timber from the sawmills used in furniture factories and in joinery, and synthetic resins from chemical works used to make plastic products. On the other hand, the aggregate value of production was assessed without duplication, the value added by each industry being taken into account once only. For this reason, the value of production, and not the value of output, was used as a measure of activity in the manufacturing industries as a whole.

Statistics relating to factory activity in the Australian Capital Territory and Northern Territory are included in the figures contained in this chapter as from 1 July 1964, unless otherwise indicated.

A standard classification of manufacturing industries was used in compiling statistical data relating to factories in Australia. It was designed in accordance with decisions of the 1945 Conference of Statisticians, and represents a revision and extension of a classification which was introduced in 1930-31, replacing the revised versions of the original classification formulated in 1902.

#### Factory development since 1901, Australia

##### FACTORIES: AUSTRALIA(a), 1901 TO 1967-68

Year	Factories	Employment(b)	Value of—					Plant and machinery (e)
			Salaries and wages paid(c)	Materials and fuel used	Output	Production (d)	Land and buildings (e)	
	No.	'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1901	11,143	198	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1911	14,455	312	55,056	163,526	266,044	102,518	65,402	63,032
1920-21	17,113	367	125,864	427,118	647,986	220,868	121,662	137,310
1930-31	21,751	339	124,910	344,978	581,598	236,620	224,422	248,996
1940-41	27,300	650	275,838	773,762	1,289,590	515,828	288,188	322,712
1950-51	43,147	969	983,436	2,613,926	4,301,670	1,687,744	605,570	673,230
1960-61	57,782	1,145	2,289,230	6,115,930	10,465,765	4,349,835	2,389,140	2,785,565
1963-64	59,375	1,210	2,651,620	7,372,682	12,642,686	5,270,003	3,204,685	3,480,673
1964-65	61,042	1,269	2,993,709	8,140,600	14,037,355	5,896,754	3,505,859	3,766,253
1965-66	61,686	1,294	3,162,769	8,437,958	14,689,819	6,251,861	3,776,590	4,154,652
1966-67	62,500	1,309	3,407,683	9,015,844	15,892,845	6,877,001	4,061,193	4,706,843
1967-68	62,954	1,331	3,665,902	9,663,217	17,094,070	7,430,853	4,303,156	4,962,203

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory. (b) 1901 and 1911—average employment during period of operation. Later years relate to average employment over whole year. Working proprietors are included in all years. (c) Excludes amounts drawn by working proprietors. (d) Value added in process of manufacture (i.e. value of output less value of materials and fuel, etc. used). (e) Depreciated or book values at 30 June. Includes estimated values of rented premises and machinery.

## Number of factories

## Number in each State and Territory

## FACTORIES: NUMBER, STATES AND TERRITORIES, 1963-64 TO 1967-68

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust. (a)
1963-64 . . .	23,642	17,597	5,955	5,826	4,609	1,746	n.a.	n.a.	59,375
1964-65 . . .	24,368	17,925	5,962	5,887	4,734	1,805	174	187	61,042
1965-66 . . .	24,531	17,980	6,010	6,065	4,906	1,792	185	217	61,686
1966-67 . . .	24,849	18,053	6,013	6,222	5,167	1,771	187	238	62,500
1967-68 . . .	24,884	18,030	6,154	6,255	5,404	1,797	188	242	62,954

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

## FACTORIES: NUMBER, BY CLASS OF INDUSTRY, AUSTRALIA(a), 1963-64 TO 1967-68

Class of industry	1963-64	1964-65	1965-66	1966-67	1967-68
1. Treatment of non-metalliferous mine and quarry products . . . . .	1,517	1,557	1,611	1,615	1,635
2. Bricks, pottery, glass, etc. . . . .	692	689	678	676	659
3. Chemicals, dyes, explosives, paints, oils, grease . . . . .	1,303	1,325	1,354	1,379	1,379
4. Industrial metals, machines, conveyances . . . . .	25,415	26,665	27,549	28,424	29,213
5. Precious metals, jewellery, plate . . . . .	927	980	970	975	984
6. Textiles and textile goods (not dress) . . . . .	1,358	1,373	1,360	1,329	1,332
7. Skins and leather (not clothing or footwear) . . . . .	645	639	631	616	603
8. Clothing (except knitted) . . . . .	7,447	7,450	7,271	7,141	6,965
9. Food, drink and tobacco . . . . .	7,034	7,060	6,938	6,834	6,689
10. Sawmills, joinery, boxes, etc., wood turning and carving . . . . .	5,422	5,454	5,402	5,414	5,336
11. Furniture of wood, bedding, etc. . . . .	2,181	2,210	2,200	2,260	2,275
12. Paper, stationery, printing, bookbinding, etc. . . . .	2,828	2,937	2,971	3,052	3,085
13. Rubber . . . . .	674	705	711	685	648
14. Musical instruments . . . . .	82	76	73	69	70
15. Miscellaneous products . . . . .	1,494	1,575	1,627	1,701	1,746
Total, classes 1 to 15. . . . .	59,019	60,695	61,346	62,170	62,619
16. Heat, light and power . . . . .	356	347	340	330	335
Total, all classes . . . . .	59,375	61,042	61,686	62,500	62,954

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

## Employment in factories

## Number employed

All persons employed in the manufacturing activities of a factory were counted as factory employees. The figures relating to employment, therefore, excluded all those engaged in selling and distribution, such as salesmen, travellers, collectors, carters engaged solely on delivery of manufactured goods, and retailing storemen. The figures, however, included proprietors who worked in their own business, as well as 'out-workers'. From 1960-61 the occupational groupings collected were—(i) working proprietors; (ii) managerial and clerical staff including salaried managers and working directors; (iii) chemists, draughtsmen and other laboratory and research staff; and (iv) foremen and overseers, workers in factory and others, in which were amalgamated the three former groups—



(iv) foremen and overseers; (v) skilled and unskilled workers; (vi) carters (excluding delivery only), messengers, and persons working regularly at home. Statistics of factory employment represented the equivalent average number employed over a full year of fifty-two weeks.

### FACTORIES: EMPLOYMENT, STATES AND TERRITORIES, 1963-64 TO 1967-68

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.(a)
Average number employed during full year (fifty-two weeks)—									
1963-64 . . . . .	487,753	413,120	110,696	110,813	55,705	31,833	n.a.	n.a.	1,209,920
1964-65 . . . . .	508,979	432,413	116,246	116,183	58,097	32,580	1,210	3,227	1,268,935
1965-66 . . . . .	519,364	439,149	117,581	118,343	60,282	34,315	1,294	3,495	1,293,823
1966-67 . . . . .	524,054	445,307	117,937	118,220	63,757	34,879	1,423	3,631	1,309,208
1967-68 . . . . .	531,185	449,945	120,852	121,417	67,335	35,178	1,519	3,716	1,331,147
Percentage of Australian total—									
1963-64 . . . . .	40.31	34.14	9.15	9.16	4.60	2.63	n.a.	n.a.	100
1964-65 . . . . .	40.11	34.08	9.16	9.15	4.58	2.57	0.10	0.25	100
1965-66 . . . . .	40.14	33.94	9.09	9.15	4.66	2.65	0.10	0.27	100
1966-67 . . . . .	40.03	34.01	9.01	9.03	4.87	2.66	0.11	0.28	100
1967-68 . . . . .	39.91	33.80	9.08	9.12	5.06	2.64	0.11	0.28	100
Per 1,000 of population—									
1963-64 . . . . .	120	134	69	108	70	88	n.a.	n.a.	111
1964-65 . . . . .	123	138	71	110	71	89	23	38	113
1965-66 . . . . .	123	137	71	109	72	93	23	38	113
1966-67 . . . . .	123	137	70	107	74	93	25	36	112
1967-68 . . . . .	122	136	70	108	75	93	25	34	112

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

### FACTORIES: AVERAGE NUMBER OF PERSONS EMPLOYED, BY CLASS OF INDUSTRY, AUSTRALIA(a), 1963-64 TO 1967-68

Class of industry	1963-64	1964-65	1965-66	1966-67	1967-68
1. Treatment of non-metalliferous mine and quarry products . . . . .	24,704	25,683	26,011	26,104	26,685
2. Bricks, pottery, glass, etc. . . . .	25,656	27,002	27,177	26,974	27,171
3. Chemicals, dyes, explosives, paints, oils, grease . . . . .	49,023	51,498	53,111	54,629	55,053
4. Industrial metals, machines, conveyances . . . . .	552,795	588,022	601,637	611,614	626,280
5. Precious metals, jewellery, plate . . . . .	5,543	5,900	5,926	5,990	6,108
6. Textiles and textile goods (not dress) . . . . .	73,076	75,281	74,708	73,036	73,804
7. Skins and leather (not clothing or footwear) . . . . .	12,209	12,026	11,807	11,355	11,458
8. Clothing (except knitted) . . . . .	108,909	110,613	111,793	111,909	111,040
9. Food, drink and tobacco . . . . .	134,487	138,768	142,153	143,510	144,441
10. Sawmills, joinery, boxes, etc., wood turning and carving . . . . .	57,650	59,815	60,642	59,976	60,274
11. Furniture of wood, bedding, etc. . . . .	22,545	23,251	23,740	24,390	25,055
12. Paper, stationery, printing, bookbinding, etc. . . . .	79,250	83,692	87,129	89,192	90,563
13. Rubber . . . . .	20,261	20,813	20,416	20,198	21,111
14. Musical instruments . . . . .	779	785	764	824	831
15. Miscellaneous products . . . . .	27,422	30,057	31,154	33,431	35,469
Total, classes 1 to 15 . . . . .	1,194,309	1,253,206	1,278,168	1,293,132	1,315,343
16. Heat, light and power . . . . .	15,611	15,729	15,655	16,076	15,804
Total all classes . . . . .	1,209,920	1,268,935	1,293,823	1,309,208	1,331,147

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.



**FACTORIES: MALES AND FEMALES EMPLOYED, STATES AND TERRITORIES  
1963-64 TO 1967-68**

<i>State or Territory</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>
<b>MALES</b>					
New South Wales . . . . .	366,250	379,672	387,181	390,087	395,838
Victoria . . . . .	295,440	307,006	310,303	314,017	316,108
Queensland . . . . .	91,123	95,328	96,150	96,082	98,027
South Australia . . . . .	90,933	94,690	96,194	96,076	98,929
Western Australia . . . . .	48,163	50,065	51,464	53,981	56,835
Tasmania . . . . .	26,221	26,768	28,041	28,364	28,550
Northern Territory . . . . .	n.a.	1,098	1,182	1,308	1,380
Australian Capital Territory . . . . .	n.a.	2,634	2,896	2,992	3,007
<b>Australia(a) . . . . .</b>	<b>918,130</b>	<b>957,261</b>	<b>973,411</b>	<b>982,907</b>	<b>998,674</b>
<b>FEMALES</b>					
New South Wales . . . . .	121,503	129,307	132,183	133,967	135,347
Victoria . . . . .	117,680	125,407	128,846	131,290	133,837
Queensland . . . . .	19,573	20,918	21,431	21,855	22,825
South Australia . . . . .	19,880	21,493	22,149	22,144	22,488
Western Australia . . . . .	7,542	8,032	8,818	9,776	10,500
Tasmania . . . . .	5,612	5,812	6,274	6,515	6,628
Northern Territory . . . . .	n.a.	112	112	115	139
Australian Capital Territory . . . . .	n.a.	593	599	639	709
<b>Australia(a) . . . . .</b>	<b>291,790</b>	<b>311,674</b>	<b>320,412</b>	<b>326,301</b>	<b>332,473</b>

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

**Salaries and wages paid, value of materials used, output, and production**

In the table relating to salaries and wages paid in factories the amounts drawn by working proprietors are excluded.

**FACTORIES: SALARIES AND WAGES PAID, AUSTRALIA(a)  
1963-64 TO 1967-68**

<i>Year</i>	<i>Males</i>	<i>Females</i>	<i>Total</i>
Total amount paid (\$'000)—			
1963-64 . . . . .	2,249,580	402,040	2,651,620
1964-65 . . . . .	2,536,347	457,362	2,993,709
1965-66 . . . . .	2,671,358	491,411	3,162,769
1966-67 . . . . .	2,876,656	531,027	3,407,683
1967-68 . . . . .	3,096,386	569,516	3,665,902

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

**FACTORIES: TOTAL VALUE OF POWER, FUEL AND LIGHT USED(a)  
BY CLASS OF INDUSTRY, AUSTRALIA(b), 1963-64 TO 1967-68**  
(\$'000)

<i>Class of industry</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>
1. Treatment of non-metalliferous mine and quarry products . . . . .	24,245	26,575	26,455	26,987	27,728
2. Bricks, pottery, glass, etc. . . . .	19,761	20,552	20,337	21,128	23,268
3. Chemicals, dyes, explosives, paints, oils, grease . . . . .	45,500	50,468	52,557	57,864	64,375
4. Industrial metals, machines, conveyances . . . . .	158,843	171,268	180,606	199,444	216,098
5. Precious metals, jewellery, plate . . . . .	851	1,052	1,132	1,190	1,304
6. Textiles and textile goods (not dress) . . . . .	10,840	11,271	11,630	12,039	12,938
7. Skins and leather (not clothing or footwear) . . . . .	2,428	2,424	2,358	2,321	2,444
8. Clothing (except knitted) . . . . .	5,227	5,452	5,545	5,770	5,886
9. Food, drink and tobacco . . . . .	41,577	43,967	46,025	47,545	49,834
10. Sawmills, joinery, boxes, etc., wood turning and carving . . . . .	8,553	9,257	9,373	9,539	9,984
11. Furniture of wood, bedding, etc. . . . .	1,096	1,156	1,218	1,285	1,391
12. Paper, stationery, printing, bookbinding, etc. . . . .	15,843	17,280	18,551	20,550	21,602
13. Rubber . . . . .	6,285	6,386	6,550	6,838	7,173
14. Musical instruments . . . . .	96	95	91	105	115
15. Miscellaneous products . . . . .	4,672	5,304	5,577	6,314	7,272
<i>Total, classes 1 to 15</i> . . . . .	<i>345,818</i>	<i>372,506</i>	<i>388,007</i>	<i>418,940</i>	<i>451,414</i>
16. Heat, light and power . . . . .	91,335	94,127	99,337	103,360	107,421
<b>Total, all classes</b> . . . . .	<b>437,153</b>	<b>466,633</b>	<b>487,343</b>	<b>522,300</b>	<b>558,834</b>

(a) Includes value of lubricants and water. (b) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

**FACTORIES: VALUE OF POWER, FUEL AND LIGHT USED(a), STATES AND TERRITORIES  
1963-64 TO 1967-68**  
(\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.(b)</i>
1963-64 . . . . .	210,157	114,648	37,462	34,772	23,749	16,364	n.a.	n.a.	437,153
1964-65 . . . . .	217,548	125,161	38,749	39,295	26,045	18,327	865	644	466,633
1965-66 . . . . .	223,517	127,858	43,791	44,066	27,314	19,181	856	760	487,343
1966-67 . . . . .	238,113	134,399	46,949	51,302	30,031	19,826	946	735	522,300
1967-68 . . . . .	252,639	143,086	51,871	56,205	33,561	19,485	1,157	830	558,834

(a) Includes value of lubricants and water. (b) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

**FACTORIES: VALUE OF MATERIALS USED, BY CLASS OF INDUSTRY, AUSTRALIA(a)**  
**1963-64 TO 1967-68**  
**(\$'000)**

<i>Class of industry</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>
1. Treatment of non-metalliferous mine and quarry products . . . . .	193,603	219,634	232,826	245,768	270,249
2. Bricks, pottery, glass, etc. . . . .	59,540	69,275	69,239	75,127	82,482
3. Chemicals, dyes, explosives, paints, oils, grease	726,437	802,349	850,221	933,329	1,014,123
4. Industrial metals, machines, conveyances . . . . .	2,713,241	3,102,783	3,213,745	3,422,377	3,712,583
5. Precious metals, jewellery, plate . . . . .	11,459	14,195	14,405	14,911	16,030
6. Textiles and textile goods (not dress) . . . . .	355,503	374,764	370,844	394,860	404,240
7. Skins and leather (not clothing or footwear).	75,641	72,518	73,642	73,288	66,939
8. Clothing (except knitted) . . . . .	265,805	280,195	282,823	304,160	309,113
9. Food, drink and tobacco . . . . .	1,560,847	1,652,933	1,728,394	1,837,269	1,940,410
10. Sawmills, joinery, boxes, etc., wood turning and carving . . . . .	255,936	282,792	286,639	299,345	317,488
11. Furniture of wood, bedding, etc. . . . .	94,283	104,177	104,168	109,226	118,581
12. Paper, stationery, printing, bookbinding, etc.	367,028	409,999	431,037	462,333	496,025
13. Rubber . . . . .	109,355	119,250	118,436	119,819	128,027
14. Musical instruments . . . . .	3,031	3,336	3,161	3,797	3,614
15. Miscellaneous products . . . . .	105,742	122,921	126,339	151,070	176,289
<i>Total, classes 1 to 15</i> . . . . .	<i>6,897,451</i>	<i>7,631,121</i>	<i>7,905,917</i>	<i>8,446,680</i>	<i>9,056,193</i>
16. Heat, light and power . . . . .	38,078	42,847	44,698	46,864	48,190
<b>Total, all classes</b> . . . . .	<b>6,935,530</b>	<b>7,673,967</b>	<b>7,950,615</b>	<b>8,493,544</b>	<b>9,104,383</b>

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

**FACTORIES: VALUE OF MATERIALS USED, STATES AND TERRITORIES**  
**1963-64 TO 1967-68**  
**(\$'000)**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust(a)</i>
1963-64 . . . . .	2,859,622	2,190,398	812,924	599,658	300,798	172,130	n.a.	n.a.	6,935,530
1964-65 . . . . .	3,212,677	2,425,961	824,681	668,946	329,740	195,972	4,550	11,440	7,673,967
1965-66 . . . . .	3,266,547	2,469,372	924,427	698,996	362,634	209,794	5,497	13,349	7,950,615
1966-67 . . . . .	3,466,134	2,671,315	982,896	728,094	399,406	223,566	7,214	14,918	8,493,544
1967-68 . . . . .	3,712,895	2,813,424	1,072,543	788,018	465,554	227,573	7,995	16,382	9,104,383

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

**Value of output**

The value of output represented the selling value at the factory (excluding delivery costs and charges) of goods made or processed during the year, including by-products. In addition, it included the amount received for other work done, such as repair work, assembling and making up for customers. The difference between the sum of the values of the materials and of the power, fuel and light used, and the value of output, was the net value of factory production.

**FACTORIES: VALUE OF OUTPUT, BY CLASS OF INDUSTRY, AUSTRALIA(a)**  
**1963-64 TO 1967-68**  
 (\$'000)

<i>Class of industry</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>
1. Treatment of non-metalliferous mine and quarry products . . . . .	366,053	413,235	427,652	459,415	501,664
2. Bricks, pottery, glass, etc. . . . .	193,031	221,894	225,147	242,627	269,138
3. Chemicals, dyes, explosives, paints, oils, grease . . . . .	1,221,410	1,357,619	1,445,480	1,618,841	1,765,495
4. Industrial metals, machines, conveyances . . . . .	5,046,075	5,760,129	6,042,120	6,534,706	7,092,313
5. Precious metals, jewellery, plate . . . . .	31,062	37,024	38,424	40,857	43,688
6. Textiles and textile goods (not dress) . . . . .	618,816	665,617	665,227	709,976	732,196
7. Skins and leather (not clothing or footwear) . . . . .	119,037	117,092	119,112	119,703	117,414
8. Clothing (except knitted) . . . . .	552,447	587,946	607,336	651,432	675,075
9. Food, drink and tobacco . . . . .	2,302,914	2,454,023	2,592,748	2,777,071	2,927,728
10. Sawmills, joinery, boxes, etc., wood turning and carving . . . . .	470,768	524,043	536,796	565,434	599,192
11. Furniture of wood, bedding, etc. . . . .	171,290	189,742	195,992	210,182	225,584
12. Paper, stationery, printing, book-binding, etc. . . . .	762,610	854,204	909,061	986,199	1,066,600
13. Rubber . . . . .	201,343	214,692	215,194	226,126	248,446
14. Musical instruments . . . . .	8,028	9,300	9,285	10,801	11,768
15. Miscellaneous products . . . . .	221,084	252,569	261,887	316,179	363,772
<i>Total, classes 1 to 15</i> . . . . .	<i>12,285,964</i>	<i>13,659,129</i>	<i>14,291,460</i>	<i>15,469,550</i>	<i>16,640,075</i>
16. Heat, light and power . . . . .	356,722	378,225	398,360	423,295	453,995
<i>Total, all classes</i> . . . . .	<i>12,642,686</i>	<i>14,037,355</i>	<i>14,689,819</i>	<i>15,892,845</i>	<i>17,094,070</i>

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

**FACTORIES: VALUE OF OUTPUT, STATES AND TERRITORIES, 1963-64 TO 1967-68**  
 (\$'000)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.(a)</i>
1963-64 . . . . .	5,337,695	4,054,822	1,292,260	1,061,786	555,058	341,065	n.a.	n.a.	12,642,686
1964-65 . . . . .	5,951,702	4,500,786	1,341,853	1,206,830	616,422	381,549	12,068	26,145	14,037,355
1965-66 . . . . .	6,154,835	4,624,915	1,511,214	1,270,539	678,751	404,581	13,456	31,528	14,689,819
1966-67 . . . . .	6,632,474	5,041,051	1,622,451	1,343,160	765,224	437,964	16,007	34,514	15,892,845
1967-68 . . . . .	7,096,517	5,351,311	1,782,267	1,476,113	887,372	445,076	18,831	36,583	17,094,070

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

**Value of production**

*By class of industry.* The value of production for any industry was defined at the Conference of Statisticians at Sydney in 1925 as 'the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production'.

In accordance with this definition, it was agreed that a deduction consisting of the costs of raw material, containers, power, fuel, light, lubricants, water, tools replaced, repairs to plant and depreciation should be made from the 'value of output'. Because of the difficulty experienced in securing accurate figures for depreciation, however, it was subsequently decided that no deduction should be made on this account. All the deductions mentioned above, with the exception of depreciation, were included in the items 'value of materials used' and 'value of fuel used' as defined above. The net value of production as given in the following tables was obtained, therefore, by deducting only 'value of materials used' and 'value of fuel used' from the 'value of output'. The value of factory production, therefore, approximated 'net value added' in the manufacturing process.



Only certain selected items of cost were recorded in the annual census of production. It must not, therefore, be inferred that when wages and salaries were deducted from the value of production the whole of the 'surplus' was available for interest and profit, as many miscellaneous expenses such as taxation, insurance, advertising, and other overhead charges, as well as depreciation, also had to be taken into account.

**FACTORIES: VALUE OF PRODUCTION, BY CLASS OF INDUSTRY AUSTRALIA(a)**  
1963-64 TO 1967-68  
(\$'000)

<i>Class of industry</i>	<i>1963-64</i>	<i>1964-65</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>
1. Treatment of non-metalliferous mine and quarry products . . . . .	148,204	167,026	168,371	186,660	203,687
2. Bricks, pottery, glass, etc. . . . .	113,729	132,067	135,571	146,372	163,388
3. Chemicals, dyes, explosives, paints, oils, grease . . . . .	449,473	504,802	542,702	627,647	686,997
4. Industrial metals, machines, conveyances . . . . .	2,173,990	2,486,078	2,647,768	2,912,885	3,163,632
5. Precious metals, jewellery, plate . . . . .	18,752	21,777	22,886	24,756	26,355
6. Textiles and textile goods (not dress) . . . . .	252,473	279,582	282,753	303,057	315,017
7. Skins and leather (not clothing or footwear). . . . .	40,968	42,150	43,111	44,093	48,031
8. Clothing (except knitted) . . . . .	281,415	302,300	318,968	341,502	360,076
9. Food, drink and tobacco . . . . .	700,489	757,122	818,329	892,257	937,484
10. Sawmills, joinery, boxes, etc., wood turning and carving . . . . .	206,278	231,995	240,785	256,551	271,719
11. Furniture of wood, bedding, etc. . . . .	75,911	84,409	90,606	99,671	105,612
12. Paper, stationery, printing, bookbinding, etc. . . . .	379,738	426,925	459,473	503,315	548,973
13. Rubber . . . . .	85,704	89,057	90,208	99,469	113,245
14. Musical instruments . . . . .	4,901	5,868	6,032	6,899	8,040
15. Miscellaneous products . . . . .	110,670	124,344	129,971	158,795	180,211
<i>Total, classes 1 to 15</i> . . . . .	<i>5,042,695</i>	<i>5,655,502</i>	<i>5,997,536</i>	<i>6,603,930</i>	<i>7,132,468</i>
16. Heat, light and power . . . . .	227,308	241,251	254,325	273,072	298,384
<b>Total, all classes</b> . . . . .	<b>5,270,003</b>	<b>5,896,754</b>	<b>6,251,861</b>	<b>6,877,001</b>	<b>7,430,853</b>

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

**FACTORIES: VALUE OF PRODUCTION—TOTALS AND AVERAGES**  
STATES AND TERRITORIES, 1963-64 TO 1967-68

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.(a)</i>
<b>Total value (\$'000)—</b>									
1963-64 . . . . .	2,267,917	1,749,776	441,873	427,356	230,511	152,571	n.a.	n.a.	5,270,003
1964-65 . . . . .	2,521,476	1,949,665	478,423	498,588	260,637	167,251	6,654	14,060	5,896,754
1965-66 . . . . .	2,664,771	2,027,685	542,996	527,477	288,803	175,606	7,103	17,418	6,251,861
1966-67 . . . . .	2,928,227	2,235,337	592,607	563,764	335,788	194,571	7,847	18,860	6,877,001
1967-68 . . . . .	3,130,982	2,394,801	657,853	631,890	388,257	198,019	9,680	19,372	7,430,853
<b>Average per person employed (\$)—</b>									
1963-64 . . . . .	4,650	4,236	3,992	3,857	4,138	4,793	n.a.	n.a.	4,356
1964-65 . . . . .	4,954	4,509	4,116	4,291	4,486	5,134	5,499	4,357	4,647
1965-66 . . . . .	5,131	4,617	4,618	4,457	4,791	5,117	5,489	4,984	4,854
1966-67 . . . . .	5,588	5,020	5,025	4,769	5,267	5,578	5,514	5,194	5,261
1967-68 . . . . .	5,894	5,322	5,443	5,204	5,766	5,629	6,373	5,213	5,582

(a) Before 1 July 1964, excludes Northern Territory and Australian Capital Territory.

## Principal factory products

The factory production of certain commodities is shown in the monthly and quarterly publications of this Bureau, in the series *Manufacturing Industries*, and in the bulletin *Manufacturing Commodities*, formerly *Secondary Industries, Part II.—Materials Used and Articles Produced in Factories*.

The following table shows the total recorded production of some of the principal articles (i.e. of those for which production can be represented in quantitative terms) manufactured in Australia. A more complete list, where available, is published in the aforementioned bulletin and in the mimeographed statement *Principal Manufacturing Commodities*. Figures for 1965-66 to 1967-68 are those recorded in the Annual Factory Census. Figures for 1968-69 are derived from monthly returns and are subject to revision.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING  
ESTABLISHMENTS: AUSTRALIA 1965-66 TO 1968-69

Commodity code	Article		1965-66 (a)	1966-67 (a)	1967-68 (a)	1968-69 <sup>(b)</sup>
	Acid (in terms of 100%)—					
401.29	Hydrochloric . . . . .	tons	n.a.	n.a.	n.a.	35,320
401.37	Nitric . . . . .	"	25,522	31,009	35,033	65,039
401.57	Sulphuric . . . . .	'000 tons	1,781	1,991	1,892	1,853
171.03, 05	Aerated and carbonated waters . . . . .	'000 gal	105,381	112,937	126,933	133,676
	Air-conditioning equipment—					
657.03, 05	Room air conditioners (refrigerated) . . . . .	No.	18,217	22,217	30,509	49,980
657.13, 15	Room air coolers (evaporative coolers) . . . . .	"	6,000	10,414	18,363	(b)
657.21, 22, 23	Package unit air conditioners . . . . .	"	2,047	3,491	4,654	8,115
475.04, 06, 07, 85	Asbestos cement building sheets (finished) . . . . .	'000 sq yd	32,364	32,609	36,251	38,049
	Bags, leather, fibre, etc.—					
	Handbags—					
864.31	Leather . . . . .	No.	534,121	501,762	492,736	448,197
864.33	Plastic . . . . .	'000	1,993	1,938	2,294	2,442
864.39	Other . . . . .	No.	393,037	392,798	396,281	491,402
946.01-52	Hessian and calico bags . . . . .	'000 doz	3,601	3,808	3,973	3,697
864.11-19	Suitcases, kitbags and trunks . . . . .	'000	1,515	1,551	1,592	(b)
864.41-49	All other(c) . . . . .	"	2,128	2,057	1,988	2,002
	Bath heaters—					
652.01	Electric . . . . .	No.	13,524	11,701	11,777	10,055
652.03, 04	Gas . . . . .	"	9,971	9,026	8,468	6,270
652.05	Solid fuel . . . . .	"	13,963	12,446	11,820	9,584
779.	Bathing suits . . . . .	doz	261,190	301,723	299,825	354,445
	Baths—					
671.01	C.I.P.E. . . . .	No.	85,447	74,489	74,527	159,994
671.03-08	Other . . . . .	"	67,068	79,987	87,419	
	Batteries, wet cell type—					
685.13, 15	Auto (S.L.I.) 6 volts . . . . .	'000	470	481	465	330
685.17, 19	Auto (S.L.I.) 12 volts . . . . .	"	1,312	1,488	1,653	1,718
685.33, 35	Radio, homelighter, fencer . . . . .	No. of 2 volt cells	136,173	117,445	106,525	91,851
685.43-65	Traction, plant and other . . . . .	doz	78,066	99,537	70,518	92,332
172.02, 04, 06	Beer (excluding waste beer) . . . . .	'000 gal	279,503	293,714	309,775	326,623
064.21	Biscuits . . . . .	'000 lb	223,678	230,118	233,383	233,672
372.52-66	Blankets . . . . .	'000	1,701	1,725	1,654	1,582
	Boots and shoes (see Footwear)					
152.02	Bran (wheaten) . . . . .	tons (2,000 lb)	206,127	202,183	195,862	184,004
172.21	Brandy . . . . .	'000 proof gal	1,371	791	872	1,096
777.41, 49	Brassieres . . . . .	doz	719,739	792,015	815,130	765,065
064.03-13	Bread (2 lb loaf equivalent) . . . . .	'000	787,841	802,936	805,679	790,617
066.01-31	Breakfast food, cereal (ready to eat) . . . . .	cwt	904,040	900,231	935,523	967,728
472.01, 03	Bricks, clay . . . . .	million	1,360	1,361	1,440	1,612
261.41	Briquettes, brown coal . . . . .	'000 tons	1,883	1,820	1,745	1,471
051.31	Butter . . . . .	'000 lb	460,433	489,217	432,313	439,220
773.51, 71, 81	Cardigans, sweaters, etc. . . . .	'000 doz	1,432	1,436	1,378	1,345
474.02	Cement, Portland . . . . .	'000 tons	3,688	3,661	3,805	4,075
051.36-46	Cheese (green weight) . . . . .	'000 lb	131,300	153,834	155,385	164,837
183.02, 11	Cigarettes and cigars . . . . .	lb	47,543	50,384	51,517	55,050
	Cloth (including mixtures)—					
373.10-52	Cotton(d) . . . . .	'000 sq yd	55,701	57,573	59,043	56,715
374.02-16	Rayon and acetate . . . . .	"	32,985	35,692	37,226	36,199
374.20-34	Synthetic (non-cellulosic) . . . . .	"	20,805	23,530	27,904	32,193
372.02-50	Wool . . . . .	"	32,588	30,635	32,599	32,036
	Coke—					
435.22	Metallurgical . . . . .	'000 tons	3,179	3,365	3,678	3,647
435.12	Other . . . . .	tons	599,301	551,326	507,253	404,887
475.90	Concrete, ready mixed . . . . .	'000 cu yd	6,736	7,000	7,955	8,712
	Confectionery—					
104.02-18	Chocolate . . . . .	'000 lb	104,312	104,934	98,984	108,506
104.21-29	Other . . . . .	"	107,856	111,796	112,848	114,237
452.04	Copper, refined(e) . . . . .	tons	91,588	74,313	72,166	94,786

(a) Excludes Northern Territory and Australian Capital Territory. (b) Not available for publication.  
(c) Excludes canvas water bags. (d) Excludes tyre-cord fabric. (e) Primary origin only.

# PRINCIPAL FACTORY PRODUCTS

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## QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA, 1965-66 TO 1968-69—continued

Commodity code	Article	1965-66 (a)	1966-67 (a)	1967-68 (a)	1968-69
653.31	Coppers (wash boilers)—				
653.33, 34	Electric . . . . .	No.	9,113	8,011	9,462
653.51	Gas . . . . .	"	5,740	4,949	6,464
171.06, 10	Inserts . . . . .	"	19,074	9,047	(b) 7,203
777.01-29	Cordials and syrups . . . . .	'000 gal	9,144	9,160	9,776
611.01	Corsets and corselets . . . . .	doz	380,835	393,231	418,145
	Cycles (complete) . . . . .	No.	63,641	69,365	90,671
804.01	Dentifrices (toothpaste) . . . . .	'000 lb	9,774	10,773	10,324
					11,424
503.06	Electric generators—				
503.08	Non-automotive—Alternating current . . . . .	No.	1,676	1,763	2,111
499.42, 44	Direct current . . . . .	"	1,022	708	632
523.76-78	Electricity . . . . .	mil. kWh	38,279	41,484	44,531
502.22-39	Electrodes for manual welding . . . . .	'000 lb	43,746	45,705	45,180
	Engines, internal combustion(c) . . . . .	'000	245	288	258
139.31	Essences, flavouring—				
139.35	Domestic . . . . .	gal	134,011	100,460	90,861
	Industrial . . . . .	"	599,426	733,289	840,894
802.11, 12	Face powder . . . . .	lb	285,870	376,236	298,233
696.01, 03, 05	Fans, electric . . . . .	No.	223,409	321,600	360,346
045.01, 51	Fish, canned (including fish loaf) . . . . .	'000 lb	11,849	13,713	17,403
332.06	Floorboards—				
332.08	Australian timber . . . . .	'000 super ft	162,710	154,286	151,812
	Imported timber . . . . .	"	721	324	463
841.01-07	Floor coverings—				
841.31-41, 841.54-68	Textile . . . . .	'000 sq yd	11,692	12,624	12,758
841.85	Smooth surface . . . . .	"	14,041	12,150	14,524
692.22	Underfelts, underlays, etc. . . . .	"	11,067	(d) 14,802	(d) 16,613
	Floor polishers, electric . . . . .	No.	89,193	88,840	(d) 18,485
068.01	Flour—				
062.01, 10, 32	Self-raising . . . . .	'000 cwt	864	832	804
	Wheaten(e) . . . . .	'000 tons (2,000 lb)	1,414	1,392	1,419
791.	Footwear (not rubber)—				
	Boots, shoes and sandals . . . . .	'000 pairs	34,949	37,080	38,076
	Slippers . . . . .	"	4,609	4,454	4,298
074.61-79	Fruit juices, natural—				
074.76, 82, 89	Single strength . . . . .	'000 gal	7,317	9,798	8,779
	Concentrated(f) . . . . .	"	901	1,236	1,047
434.09	Gas (town) . . . . .	mil. cubic ft	55,742	56,743	58,070
781.01, 03	Gloves—				
	Dress . . . . .	doz pairs	26,163	27,761	30,913
	Work—				
781.06, 07, 31	Sewn(h) . . . . .	'000 doz pairs	382	358	371
781.11-29	Dipped . . . . .	"	1,309	1,343	1,539
127.21	Glucose . . . . .	'000 lb	60,779	65,422	61,945
832.58, 59	Golf clubs . . . . .	doz	33,145	40,680	38,082
					39,006
786.01	Handkerchiefs—				
786.11	Men's . . . . .	'000 doz	1,901	1,664	1,971
	Women's . . . . .	"	1,555	1,371	1,205
651.01, 03	Heaters, room—				
651.11-17	Solid fuel . . . . .	No.	37,967	31,606	24,558
651.21, 22, 26, 27	Radiators and electric fires . . . . .	"	706,943	600,294	623,950
	Gas fires and space heaters, domestic . . . . .	"	31,185	38,764	38,268
281.04	Ice . . . . .	tons	198,701	190,274	187,306
051.61	Ice cream . . . . .	'000 gal	30,026	34,974	37,423
051.87, 89	Infants' and invalids' milk-based health beverages(i) . . . . .	'000 lb	45,280	49,348	48,234
419.31	Ink, printing—				
419.43-59	News . . . . .	"	14,900	16,190	17,401
	Other . . . . .	"	13,971	14,782	15,440
442.04, 08	Iron and steel—				
442.10-19	Pig iron . . . . .	'000 tons	4,380	4,893	5,209
442.28	Steel ingots open hearth and electric . . . . .	"	5,561	6,114	6,287
693.51, 61, 63	Blooms and slabs . . . . .	"	4,823	4,978	5,372
	Irons, electric (hand, domestic) . . . . .	No.	450,230	507,882	465,501
076.60	Jams (including conserves, jellies, etc.) . . . . .	'000 lb	97,149	90,761	83,917
391.04	Lard . . . . .	"	5,853	6,670	6,475
699.52, 53	Lawn mowers—				
699.41, 45, 55, 61	Petrol, rotary . . . . .	No.	176,396	219,826	184,908
453.04	Other types(l) . . . . .	"	11,403	11,235	11,688
	Lead refined(m) . . . . .	tons	188,197	192,429	186,908

(a) Excludes Northern Territory and Australian Capital Territory. (b) Not available for publication. (c) Petrol and diesel. Excludes car, motor cycle, truck, tractor, aero, and marine engines. (d) New basis—Needled (or bonded) felts of jute or jute/hair mixtures (for all purposes) as from July 1966. (e) Includes wheatmeal for baking and sharps and other flour. (f) Excludes grape must. (g) Includes natural gas. (h) Excludes fabric liners for dipped gloves but includes moulded or heat sealed work gloves. (i) Includes malted milk and milk sugar (lactose). (j) Including semi-permanent mould castings, investment casting and diecasting of iron and steel. (k) Year ended 31 May. (l) Petrol cylinder, electric and hand. (m) Includes lead content of lead only from primary sources, but excludes lead-silver bullion produced for export.



**QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING  
ESTABLISHMENTS: AUSTRALIA, 1965-66 TO 1968-69—continued**

Commodity code	Article		1965-66 (a)	1966-67 (a)	1967-68 (a)	1968-69 <sup>a</sup>
	Leather—					
	Dressed or finished—					
301.43-65	Chrome tanned (including retanned)	'000 sq ft	83,175	71,953	72,214	74,617
301.31-37, 83-89	Vegetable tanned, by weight	'000 lb	15,326	12,883	11,296	10,573
301.67, 69	Vegetable tanned, by measurement	'000 sq ft	3,956	4,009	3,303	3,174
311.08, 14, 18	Tanned or dressed skins with hair or wool retained	doz	117,778	82,018	110,381	115,143
	Lime—					
275.43, 45	Crushed	tons	219,912	249,807	253,755	181,513
479.18	Hydrated	"	96,566	97,544	95,539	(b)
479.12	Quick	"	143,311	155,173	179,536	(b)
802.21	Lipstick	lb	70,104	74,842	72,323	116,734
063.11-31	Malt (excluding extract)	'000 bus	13,444	14,239	13,776	14,103
	Margarine—					
121.01	Table	'000 lb	53,698	48,356	35,576	34,393
121.06, 08	Other	"	67,884	76,138	89,285	97,032
	Mattresses and bed bases—					
844.01	Box spring	No.	80,319	100,362	118,883	143,874
844.21	Inner spring	"	705,702	682,587	659,452	656,922
844.11	Woven wire, link mesh and spring	"	557,344	638,726	626,534	722,629
844.41, 51, 61	Other	"	273,040	302,882	304,533	291,361
027.02-76	Meat, canned(c)	'000 lb	114,098	100,849	106,957	96,338
	Meters—					
702.01	Electric (domestic)(d)	No.	302,511	296,571	304,905	295,999
703.01	Gas	"	41,443	37,884	37,831	60,893
703.11	Water	"	141,042	146,915	148,839	143,912
	Milk, condensed, concentrated and evaporated—					
051.21, 22	Full cream, sweetened	'000 lb	73,985	61,510	47,316	40,439
051.24, 25, 26, 27	Full cream, unsweetened	"	88,482	91,700	87,946	98,658
051.28	Skim	"	21,196	24,974	18,932	19,670
	Milk powder—					
051.72, 73	Full cream	"	45,060	48,018	47,272	54,424
051.76-79	Skim	"	112,342	188,584	196,029	156,230
051.81, 82	Buttermilk or mixed skim and buttermilk	"	25,900	32,518	33,592	33,859
503.17-32	Motors, electric	'000	2,510	2,667	2,911	3,203
	Motor vehicles, finished—					
581.02-08	Cars	No.	235,326	238,720	270,963	288,104
581.10-16	Station wagons	"	58,334	57,534	59,047	53,788
582.04	Utilities	"	33,038	33,909	31,174	33,971
582.06	Panel vans	"	14,427	14,013	14,687	15,726
582.08-24	Truck and truck-type vehicles	"	766	768	1,137	1,664
	Motor vehicles, partly finished—					
581.22-28, 582.31, 32	Cars, station wagons, utilities, vans	"	1,666	1,381	1,663	1,397
582.33-46	Trucks and truck-type vehicles	"	20,851	21,747	21,857	25,168
589.81-89	Motor vehicle safety belts	"	426,847	835,162	962,851	984,640
465.16, 17	Nails	tons	23,414	23,830	22,925	23,243
782.03, 04	Neckties	doz	496,989	490,677	473,503	439,102
	Oatmeal and rolled oats—					
062.61, 63	For porridge, etc	cwt	313,987	340,781	314,319	309,476
062.65	Other	"	397,401	308,712	116,034	(b)
393.08-90, 394.01-54	Oils, vegetables, crude	'000 lb	87,903	84,519	95,033	94,962
	Paints, etc.—					
412.02-20	Paints (not water) and enamels ready for use	'000 gal	15,188	16,037	16,473	16,795
412.28	Paints (not water) in paste form	'000 lb	3,158	2,589	2,238	1,888
412.22, 24	Lacquers (nitro-cellulose)	'000 gal	1,437	1,427	1,427	1,481
412.32	Tinting colours, packaged ready for sale	"	54	57	68	79
412.54	Stains and clear varnishes packaged ready for sale	"	845	913	875	933
	Water paints—					
412.42, 44, 46	Emulsion type	"	4,321	4,193	4,357	4,428
412.48, 50	In powder form	'000 lb	943	870	745	776
412.64, 66,	Thinners	'000 gal	4,018	4,031	4,233	4,327
	Paper—					
351.11	Newsprint	tons	93,211	97,255	92,648	123,935
351.17-79	Other	"	351,303	389,223	385,567	440,153
352.11-33	Paperboard	"	317,553	329,496	334,660	342,403
975.04, 09, 11	Perambulators, pushers and strollers	No.	132,499	133,018	139,082	148,715
	Petrol—					
431.12	For blending and refining	million gal	45	50	50	(b)
431.04, 08, 20	Other (all types)	"	1,609	1,832	1,911	1,983
479.22	Plaster of paris	tons	265,553	261,054	278,225	281,737
479.32, 33	Plaster sheets	'000 sq yd	29,917	30,601	32,809	35,310
334.32, 34, 36, 38	Plywood, $\frac{1}{8}$ inch basis	'000 sq ft	187,258	200,451	230,018	228,581
152.06	Pollard	tons (2,000 lb)	303,162	284,628	305,468	311,960

(a) Excludes Northern Territory and Australian Capital Territory. (b) Not available for publication. (c) Excludes poultry and baby food. (d) New basis—electricity consumption meters from 1 July 1965.



# PRINCIPAL FACTORY PRODUCTS

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## QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING ESTABLISHMENTS: AUSTRALIA, 1965-66 TO 1968-69—continued

Commodity code	Article		1965-66 (a)	1966-67 (a)	1967-68 (a)	1968-69
	Preserves—					
	Fruit—					
076.01-50	Canned or bottled	'000 lb	579,619	611,552	659,700	511,970
074.01	Pulp and puree—single strength	'000 cwt	62	51	44	77
	Vegetables—					
094.02-49	Canned or bottled	'000 lb	180,098	194,834	182,051	191,857
092.02, 06, 19	Quick frozen	"	93,885	118,216	100,862	142,790
	Pyjamas—					
774.21, 23	Men's and boys' (suits only)	doz	480,396	422,640	420,563	435,920
774.51-58	Women's and girls' (incl. nightdresses)	"	627,711	722,519	746,779	719,358
832.65, 85	Racquet frames (all types)	No.	15,308	16,866	15,798	16,802
643.01, 03, 15-37	Radio receiving sets (including radiograms)	No.	392,526	445,766	522,394	676,312
	Records (Phonograph)—					
646.32, 35, 62, 65	Single play (78 and 45 rpm)	'000	4,295	4,727	5,296	7,080
646.37, 41, 51, 67, 71, 81, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99	Extended play	"	1,486	2,103	1,869	1,601
646.43, 45, 53, 55, 73, 75, 83, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99	Long play	"	5,086	6,714	6,847	9,512
657.32, 41, 53	Refrigerators, domestic	No.	213,870	232,200	245,138	(b)289,907
403, 404	Resins, plastic and synthetic, for all purposes	'000 cwt	2,421	2,854	3,349	3,883
061.67, 69	Rice, polished, unpolished and broken	No.	2,080	2,373	(c)	3,302
369.11	Ropes and cables (excluding wire)	cwt	133,355	130,843	117,670	(e)
372.70, 72, 374.59	Rugs	'000	175	191	170	184
	Sauce.	'000 pints	46,111	42,213	43,692	41,655
123.18-25	Semolina	tons (2,000 lb)	18,744	20,777	24,287	24,555
062.04	Shirts (men's and boys')	'000 doz	2,226	2,214	2,226	2,367
773.02-31	Sink heaters, electric	No.	10,646	10,174	9,941	9,473
653.01	Sinks, steel	"	219,333	226,076	212,752	220,376
671.14	Soap, for personal toilet use	'000 cwt	478	483	500	502
805.01-13	Socks and stockings—					
775.51-82	Men's and youths'	'000 doz pairs	1,690	1,815	1,910	1,902
775.01-39	Women's and maids'	"	4,563	4,971	5,600	5,820
775.91-776.42	Children's and infants'	"	903	1,045	1,004	1,097
	Soup—					
122.02, 09	Canned	'000 pints	72,032	78,985	67,201	71,413
122.13, 15	Dry-mix	'000 lb	8,226	8,803	9,127	9,141
127.11-19	Starch	"	161,555	165,563	183,800	204,105
401.53	Stearine (stearic acid)	"	9,647	10,722	11,780	12,890
461.20	Steel, constructional, fabricated	tons	517,257	547,258	558,591	539,218
	Stoves, ovens and ranges, domestic cooking—					
661.01-11	Electric(d)	No.	188,132	192,655	193,627	210,804
661.31-42	Gas(e)	"	71,265	75,482	73,127	84,614
662.01,03	Solid fuel	"	20,859	18,785	14,921	13,119
	Sugar—					
102.01, 02	Raw (94 net titre)	'000 tons	1,953	2,343	2,334	2,643
102.11	Refined	"	609	613	614	643
405.36	Sulphate of ammonia	tons	118,387	110,246	87,007	93,589
415.07	Superphosphate	'000 tons	(f)4,265	(f)4,430	(f)3,935	(g)3,879
803.61	Talcum powder	'000 lb	6,870	8,134	8,975	9,510
	Tallow (including dripping), rendering—					
391.14, 16	Edible	"	148,628	150,789	148,099	164,278
391.24	Inedible	"	345,104	361,588	353,901	357,343
643.51-68	Television sets	No.	276,586	254,811	253,247	283,398
645.52-66	Television picture tubes	"	361,534	368,517	342,159	394,942
	Tiles, roofing—					
475.30	Cement	'000	82,921	88,509	96,831	116,227
472.12	Terracotta	"	51,258	47,101	46,972	49,956
	Timber—					
	From native logs—					
331.01-07	Hardwood, etc.	'000 super ft	1,178,473	1,143,814	1,165,376	(c)
331.09-19	Softwood	"	329,532	317,591	307,683	(c)
331.23, 25	From imported logs	"	27,892	25,771	32,379	(c)
661.21, 23	Toaster, electric (domestic)	No.	329,626	366,972	331,717	392,321
183.02-28	Tobacco	'000 lb	8,407	7,595	7,463	7,314
094.51	Tomato juice	'000 gal	1,927	2,627	2,463	2,114
094.53	" paste and puree	'000 pints	22,428	22,776	11,546	13,663
094.57	" pulp	'000 cwt	133	181	193	127
373.58-64	Towels	'000 doz	960	992	892	823
671.51-59	Toilet cisterns	No.	340,895	352,791	370,346	398,751
683.03-11	Transformers, chokes and ballasts, for distribution of power and light, etc.	"	19,361	16,823	15,892	16,106
622.01-07, 19	Tubes, pneumatic (h)	'000	3,968	4,211	4,528	4,676
369.21-27	Twine (all types)	cwt	174,646	248,825	185,966	(c)
621.31-37	Tyres, pneumatic (h)	'000	5,714	5,930	6,887	(i)7,400
863.01	Umbrellas, street and general purpose	No.	716,987	825,032	930,266	611,490
774.01-18,41-47, 60, 62, 91-97	Underwear (men's, women's, children's)	'000 doz	6,305	6,179	6,624	(j)6,252

(a) Excludes Northern Territory and Australian Capital Territory. (b) Code 657.53 not collected prior to July 1968. (c) Not available for publication. (d) Includes wall ovens but excludes cooking tops and portable units. (e) Upright and elevated (with ovens) including wall ovens, but excluding hotplates, stovettes, etc. (f) Excludes ammonium phosphate. (g) Source: Department of Primary Industry, includes ammonium phosphate. (h) Excludes bicycle tubes and tyres. (i) Excludes Code 621.35. (j) Excludes Codes 774.16 and 774.18.

QUANTITIES OF PRINCIPAL ARTICLES PRODUCED IN MANUFACTURING  
ESTABLISHMENTS: AUSTRALIA, 1965-66 TO 1968-69—continued

Commodity code	Article		1965-66 (a)	1966-67 (a)	1967-68 (a)	1968-69
692.01	Vacuum cleaners (domestic)	No.	181,691	156,307	163,613	151,532
	Wash basins—					
671.31	C.I.P.E.	No.	64,126	58,040	52,919	44,631
671.37	Earthenware	"	140,652	146,546	159,480	184,625
671.33-35	Pressed steel	"	62,852	78,893	91,796	97,685
693.02-18	Washing machines, household, electric	"	240,189	231,601	278,348	302,532
	Weatherboards—					
332.12	Australian timber	'000 super ft	20,307	19,025	18,799	14,564
332.14	Imported timber	"	2,583	1,857	2,175	1,917
152.14	Wheatmeal for stock feed	tons (2,000 lb)	284,474	228,872	283,589	202,913
519.01	Wheelbarrows (metal)	No.	116,838	123,291	118,797	109,156
	Wine, beverage—					
172.42	Fortified	'000 gal	9,678	12,401	11,534	12,447
172.46	Unfortified	"	8,663	12,020	14,562	16,401
341.31-45	Wood pulp	tons	330,625	357,665	351,268	410,933
242.07-11	Wool, scoured or carbonised	'000 lb	156,113	154,119	157,860	155,882
242.32	Wool tops, pure	"	45,798	44,535	42,439	43,538
	Yarn (including mixtures)—					
364.11-50	Cotton	"	59,020	60,792	60,849	61,114
363.47-75	Woollen	"	30,534	32,641	34,596	35,672
363.17-31	Wool worsted	"	21,519	18,781	18,896	18,364
365.38-66	Rayon and acetate, spun	"	5,970	6,771	9,213	10,996
365.90, 366.03, 04, 16, 29, 30, 42, 55, 56, 88, 96, 97	Synthetic (non-cellulosic) fibres spun.	"	6,720	8,843	9,543	10,408
457.04	Zinc, refined(b)	tons	196,534	197,030	187 565	228,000

(a) Excludes Northern Territory and Australian Capital Territory.  
of zinc dust.

(b) Primary origin only includes small quantities

## CHAPTER 23

# RURAL INDUSTRY

This chapter is divided into four major parts:

Introduction, dealing with the disposal of Crown lands, closer settlement and war service settlement and general rural activity in Australia;

Agricultural production;

Pastoral production; and

Other rural industries, which includes the dairying, pig, poultry and bee-farming industries.

For greater detail on the subjects dealt with in this chapter see the annual bulletins *Rural Industries, Value of Production*, and *Manufacturing Commodities* (regarding butter, cheese, etc., factories) issued by this Bureau. Current information on commodities produced is obtainable in the *Quarterly Summary of Australian Statistics*, *Monthly Review of Business Statistics*, *Monthly Bulletin of Production Statistics*, and *Digest of Current Economic Statistics* (monthly). The series of bulletins *Classification of Rural Holdings by Size and Type of Activity* (see page 739) shows particulars of rural holdings classified by size, nature and area of crops, and numbers of livestock, and also according to main type of activity. The mimeographed annual *Report on Food Production and the Apparent Consumption of Foodstuffs and Nutrients in Australia* contains details of the production and utilisation of foodstuffs. The following mimeographed publications also contain considerable detail on the particular subjects dealt with.

**General.** *Value of Production and Indexes of Price and Quantum of Farm Production* (annual), *Value of Primary Production (Preliminary Statement)* (annual), *Value of Primary Production (Preliminary Estimates)* (annual), *Farm Machinery on Rural Holdings* (annual), *Tractors on Rural Holdings, 31 March 1969* (detailed information, triennial), *Grain and Seed Harvesters on Rural Holdings, 31 March 1970* (detailed information, triennial), *New Tractors: Receipts, Sales and Stocks* (quarterly), and *New Agricultural Machinery* (quarterly).

**Agricultural production.** *Rural Land Use and Crop Production* (annual), *Agricultural Statistics (Preliminary Statement)* (annual), *The Wheat Industry* (two a year), *The Fruit Growing Industry* (annual), and *Fruit Statistics (Preliminary Statement)* (annual), *Principal Crop Statistics: Australia, Preliminary Estimates* (annual).

**Pastoral production.** *Livestock Statistics* (annual), *Livestock Numbers* (annual), *The Meat Industry* (monthly), *Wool Production* (annual), and *Wool Production and Utilisation* (annual).

**Other rural production.** *The Dairying Industry* (monthly and half yearly), *Chicken Hatchings and Poultry Slaughterings* (monthly), *Production Summaries No. 36—Preserved Milk Products and No. 55—Butter and Cheese* (monthly), and *Bee Farming* (annual).

Detailed particulars of the early development of various aspects of Australian rural industry are given in previous issues of the Year Book up to No. 53 (see, for example No. 53, pages 885, 888, 891-2).

Throughout this chapter yearly periods for area and production of crops relate to years ended 31 March. Other periods in respect of e.g. factory and trade statistics relate to years ended 30 June.

## INTRODUCTION

### Disposal of Crown lands

#### Land legislation and tenures

The following sections contain figures showing the extent of the different land tenures in the several States and Territories, classified under broad headings indicating the nature of the tenure, together with some general descriptive matter. Information in greater detail, descriptions of the land tenure systems of the several States and the internal Territories, and conspectuses of land legislation in force and of the systems of land tenure were provided in Year Book No. 48 and previous issues (see also Year Book No. 50, page 85 and List of Special Articles, etc. preceding General Index to this Volume).

### Free grants and reservations

Provision exists in all States except Tasmania for the disposal of Crown lands for public purposes by free grants, and in all States for the temporary and or permanent reservation of Crown lands for public purposes. In the Northern Territory any Crown lands not subject to any right of, or contract for, purchase may be resumed for public purposes, and the whole or any portion of the lands resumed may be reserved for that purpose. In the Australian Capital Territory, under the *Seat of Government (Administration) Act* 1910, Crown lands may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of the Act.

### AREAS OF CROWN LANDS RESERVED: STATES AND TERRITORIES, 1966 TO 1970 (<sup>'000</sup> acres)

Year	N.S.W.(a)	Vic.(a)	Qld(b)	S.A.(a)	W.A.(a)	Tas.(a)	N.T.(a)	Total(c)
1966	15,937	(b)8,874	25,662	22,878	78,226	4,913	60,921	217,411
1967	15,875	(b)8,921	27,240	22,878	80,491	4,938	60,974	221,317
1968	15,872	(b)8,952	27,833	22,919	80,658	5,327	60,988	222,549
1969	15,849	n.a.	28,209	22,919	80,772	6,313	61,124	n.a.
1970	15,793	(d)7,787	28,466	22,925	84,018	6,782	62,217	227,988

(a) At 30 June.  
set aside for roads.

(b) At 31 December.

(c) Excludes the Australian Capital Territory.

(d) Excludes areas

The purposes for which areas were reserved are given hereunder for the latest year available as set out in the table above.

*New South Wales.* For travelling stock, 4,933,865 acres; forest reserves, 1,518,949 acres; water and camping reserves, 767,006 acres; mining reserves, 999,593 acres; recreation and parks, 6,721,829 acres; other reserves, 851,530 acres; total, 15,792,772 acres.

*Victoria.* Due to a revised basis of collection, purposes for which areas were reserved are no longer available.

*Queensland.* For timber reserves, 1,678,059 acres; State forests and national parks, 10,066,532 acres; Aboriginal reserves, 7,055,573 acres; streets, surveyed roads and stock routes, 4,326,999 acres; general reserves, 5,388,399 acres; total, 28,465,562 acres.

*South Australia.* Total area of surveyed roads, railways and other reserves, 22,925,013 acres including 18,842,645 acres set apart as Aboriginal reserves.

*Western Australia.* For State forests, 4,460,584 acres; timber reserves, 1,862,884 acres; other reserves 77,694,775 acres; total 84,018,243 acres.

*Tasmania.* For forest reserves, 5,758,000 acres; national parks, 1,024,000 acres; total, 6,782,000 acres.

*Northern Territory.* For Aboriginal, defence and public requirements, 62,217,000 acres.

### Conditional and unconditional purchases of freehold

Crown lands in the States may be disposed of by unconditional purchase at public auction or by certain other forms of purchase (for details see Year Book No. 48, pages 91-2). Conditional purchases of various types may also be made. In the Northern Territory only 0.1 per cent of the total area is alienated, the remainder being held under lease or licence, or reserved for various purposes or unoccupied. In the Australian Capital Territory about 16 per cent of the area is alienated or in process of alienation in consequence of contracts existing prior to the establishment of the Territory.

### Leases and licences

Well over half the area of the States of New South Wales and South Australia and of the Northern Territory and more than four-fifths of that of Queensland are occupied under some form of lease or licence. In Victoria, only about one-tenth of the area is leased or licensed, more than half being alienated; in Western Australia, more than one-third is leased or licensed, most of the remainder being unoccupied; in Tasmania about one-third is leased or licensed, while about one-quarter of the area of the State is occupied by the Crown or unoccupied, and the remainder alienated. Areas leased or licensed in the States are held under Crown lands Acts, closer settlement Acts, mining Acts, etc., and in the Territories under various Ordinances.



*Land Acts and Ordinances.* The types of lease and licence which obtain under land legislation cover a wide range, and vary with each State or Territory. The following are examples: grazing or pastoral, settlement and closer settlement, settlement purchase, conditional and unconditional purchase, perpetual and Crown; however, the variations of these forms and the special forms of lease and licence which exist would extend this list considerably. Details of the various types in existence are given in Year Book No. 48, pages 93-4, and some detail is included in the tables on pages 878-81 of Year Book No. 53.

**AREAS OCCUPIED UNDER LEASE OR LICENCE OTHER THAN MINING AND  
FORESTRY: STATES AND TERRITORIES, 1966 TO 1970**  
(<sup>'000 acres</sup>)

Year	N.S.W.(a)	Vic.(a)	Qld(b)	S.A.(a)	W.A.(a)	Tas. (a)	N.T. (a)(c)	A.C.T. (a)(c)	Total
1966 . .	111,262	(b)6,269	362,866	150,422	241,662	933	190,688	279	1,064,381
1967 . .	111,300	(b)5,993	359,152	149,192	244,715	915	194,543	262	1,066,072
1968 . .	110,499	(b)5,636	353,163	149,530	244,804	766	191,595	254	1,056,247
1969 . .	112,250	n.a.	346,946	149,327	245,240	699	192,966	251	n.a.
1970 . .	111,501	(a)5,469	344,003	149,951	247,010	698	197,033	251	1,055,916

(a) Year ended 30 June.

(b) Year ended 31 December.

(c) Leases and licences for all purposes.

### Closer settlement and war service settlement

#### Closer settlement

Particulars of the methods of acquisition and disposal of land for the closer settlement of civilians and returned service personnel (1914-18 War) in the several States are given in issues of the Year Book up to No. 22 (*see* No. 22, pages 163-9), and the results of the operations of the several schemes have appeared in subsequent issues in considerable detail. However, the amalgamation in some States of closer settlement records with those of other authorities has since made it impossible to obtain up-to-date figures for those States and for Australia as a whole. Page 96 of Year Book No. 48 contains particulars as at 30 June 1960 of the areas and costs for those States for which separate information is available.

#### War Service Land Settlement Scheme

The War Service Land Settlement Scheme provides for the settlement on the land of eligible ex-servicemen from the 1939-45 War and the Korea-Malaya operations. Finance for capital expenditure under the scheme in South Australia, Western Australia and Tasmania and for special loans to New South Wales and Victoria is provided through Loan (War Service Land Settlement) Acts. Finance for other aspects of the scheme in all States is provided by annual parliamentary appropriation. The *States Grants (War Service Land Settlement) Act* 1952 provides that the responsible Commonwealth Minister may make grants of financial assistance to the States under such terms as he may from time to time determine. At 30 June 1970, 9,129 farms had been allotted from a total area of 13,936,731 acres acquired and no further farms are to be provided.

Particulars of expenditure on war service land settlement, to 30 June 1968, are given in Year Book No. 55, pages 716-17.

### Alienation and occupation of Crown lands

Detailed particulars of the alienation and occupation of Crown lands in the several States and Territories are given in previous issues of the Year Book up to No. 53 (*see* No. 53, pages 878-81).

The following table provides a summary for each State and Territory, and for Australia as a whole, of the alienation and occupation of Crown lands in 1970.

## ALIENATION AND OCCUPATION OF CROWN LANDS: STATES AND TERRITORIES, 1970

State or Territory	Private lands				Crown lands				Total area
	Alienated		In process of alienation		Leased or licensed		Other(a)		
	'000 acres	Per cent	'000 acres	Per cent	'000 acres	Per cent	'000 acres	Per cent	
N S.W.(b)	61,927	31.3	4,556	2.3	113,246	57.2	18,308	9.2	198,037
Vic.(b)	33,213	59.0	430	0.8	5,469	9.7	17,134	30.5	56,246
Qld(c)	27,308	6.4	30,242	7.1	347,571	81.4	21,759	5.1	426,880
S.A.(b)	16,012	6.6	294	0.1	149,951	61.6	76,988	31.7	243,245
W.A.(c)	34,312	5.5	14,168	2.3	248,872	39.8	327,237	52.4	624,589
Tas.(b)	6,664	39.5	248	1.5	5,223	30.9	4,750	28.1	16,885
N.T.(b)	315	0.1	..	..	197,033	59.2	135,631	40.7	332,979
A.C.T.(b)(d)	85	14.1	11	1.9	251	41.7	254	42.3	601
Australia	179,836	9.5	49,949	2.6	1,067,616	56.2	602,061	31.2	1,899,462

(a) Occupied by Crown; reserved; unoccupied; unreserved. (b) At 30 June. (c) At 31 December. (d) Includes Jervis Bay area.

## Number and area of rural holdings

## Number and area

A holding in Australia has been defined by statisticians on a more or less uniform basis, and discrepancies which exist are not of sufficient importance to prevent comparisons. For the purpose of these statistics a holding has been defined as land of one acre or more in extent used for the production of agricultural produce (including fruit and vegetables) or for the raising of livestock (including poultry) and the production of livestock products.

There are considerable fluctuations from time to time in the numbers of very small holdings, and it is very difficult to determine in some cases whether or not they are rural holdings within the definition. In addition, in the very dry parts, such as the far west of New South Wales and Queensland and the remoter parts of South Australia and Western Australia, there are large areas of marginal lands sporadically occupied for extensive grazing under short-term lease or other arrangement, and the areas so occupied tend to fluctuate with the seasons. Similarly, there are rugged areas in the mountain country of some States which are also only occasionally occupied.

## RURAL HOLDINGS: NUMBER AND AREA, STATES AND TERRITORIES, 1965-66 TO 1969-70

Year	N.S.W.	Vic.(a)	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
NUMBER OF RURAL HOLDINGS									
1965-66	76,152	69,199	43,914	28,759	22,853	10,777	305	203	252,162
1966-67	76,251	68,466	43,858	28,957	23,181	10,641	304	200	251,858
1967-68	76,225	72,802	43,694	29,058	23,116	10,631	305	196	256,027
1968-69	76,103	71,056	44,074	29,137	23,004	10,384	317	195	254,270
1969-70	75,908	69,498	43,829	29,035	22,937	10,159	322	193	251,881
TOTAL AREA OF RURAL HOLDINGS ( <sup>0</sup> 000 acres)									
1965-66	171,200	37,844	380,325	159,394	270,054	6,496	175,862	355	1,201,531
1966-67	171,652	38,653	379,977	161,510	274,765	6,507	170,018	350	1,203,431
1967-68	171,767	39,564	380,993	160,765	275,334	6,579	174,385	350	1,209,737
1968-69	171,020	39,182	378,956	162,109	276,174	6,591	177,942	346	1,212,320
1969-70	170,630	39,057	380,218	162,692	280,819	6,517	182,116	339	1,222,387

(a) In 1967-68 the lists of land holdings used in the collection of agricultural and pastoral statistics in Victoria were reconciled with lists of rateable land of one acre or more in extent as recorded by municipalities for rating purposes.

**Land utilisation of rural holdings**

The following table shows the purposes for which the land on the rural holdings referred to in the preceding paragraph was used.

**RURAL HOLDINGS: LAND UTILISATION, 1965-66 TO 1969-70**  
(<sup>'000</sup> acres)

Year	Area used for crops(a)	Land lying fallow(b)	Area under sown grasses and clovers(c)	Balance of holdings(d)	Total area of holdings
1969-70—					
New South Wales . . . . .	14,302	1,589	11,078	143,661	170,630
Victoria . . . . .	5,662	1,745	19,876	11,774	39,057
Queensland . . . . .	5,185	1,474	5,452	368,107	380,218
South Australia . . . . .	6,776	901	6,146	148,869	162,692
Western Australia . . . . .	9,676	1,353	16,472	253,318	280,819
Tasmania . . . . .	242	64	1,996	4,215	6,517
Northern Territory . . . . .	3	..	140	181,974	182,116
Australian Capital Territory . . . . .	7	1	93	237	339
<b>Australia . . . . .</b>	<b>41,853</b>	<b>7,127</b>	<b>61,252</b>	<b>1,112,155</b>	<b>1,222,387</b>
1968-69 . . . . .	43,836	9,525	56,693	1,102,266	1,212,320
1967-68 . . . . .	38,730	9,340	54,379	1,107,287	1,209,737
1966-67 . . . . .	37,084	9,784	51,474	1,105,089	1,203,431
1965-66 . . . . .	32,797	10,471	48,521	1,109,742	1,201,531

(a) Excludes (i) duplication on account of area double cropped, except for New South Wales and South Australia, and (ii) clovers and grasses cut for hay and seed which have been included in Area under sown grasses and clovers, and differs therefore from crop area figures shown later in this chapter. (b) Excludes short or summer fallow. (c) Includes paspalum. (d) Used for grazing, lying idle, etc.

**Classification by size and type of activity**

Some of the information obtained from the 1965-66 Agricultural and Pastoral Census has been classified by size of principal characteristics (area of holdings, area of sown grasses and clovers, area of selected crops, and numbers of livestock). In addition, all holdings have been classified according to type of activity. Tables showing this information, for statistical divisions and States, and an outline of the methods used have been published in a series of bulletins *Classification of Rural Holdings by Size and Type of Activity, 1965-66*. Similar information was published in a series of bulletins for the year 1959-60. A size classification for each State is available for the year 1955-56. A series of bulletins for the year 1968-69 are in the course of preparation.

**Employment on rural holdings****Persons engaged**

The following table shows, for each State and Territory, the recorded number of males working on rural holdings. Particulars for females are not available except for New South Wales and Victoria. Additional particulars relating to the number of males employed in agriculture up to 1941-42 are shown in Year Book No. 36, page 852, and previous issues. Similar details for later years are not available.

**MALES(a) ENGAGED ON RURAL HOLDINGS: STATES AND TERRITORIES, 31 MARCH 1970**

Males engaged	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Permanent—									
Owners, lessees or share-farmers	57,711	53,408	43,413	21,291	18,658	6,760	165	99	201,505
Relatives of owner, lessee or share-farmer, over 14 years of age, not receiving wages or salary . . . . .	1,180	3,878	2,569	426	1,783	..	13	11	9,860
Employees, including managers and relatives working for wages or salary . . . . .	26,609	12,363	16,288	7,204	8,149	3,485	1,556	154	75,808
<b>Total permanent males . . . . .</b>	<b>85,500</b>	<b>69,649</b>	<b>62,270</b>	<b>28,921</b>	<b>28,590</b>	<b>10,245</b>	<b>1,734</b>	<b>264</b>	<b>287,173</b>
Temporary . . . . .	25,946	18,024	16,582	8,054	(b)	4,609	606	29	(b)
<b>Total males . . . . .</b>	<b>111,446</b>	<b>87,673</b>	<b>78,852</b>	<b>36,975</b>	<b>(b)</b>	<b>14,854</b>	<b>2,340</b>	<b>293</b>	<b>(b)</b>

(a) Details for females not available except for New South Wales and Victoria where 8,032 and 7,619 females respectively were engaged on rural holdings. (b) Not available for publication.

Information regarding the number of persons (males and females) working full-time on rural holdings in Australia at 31 March of years to 1958 appears in Year Book No. 50, page 987, and in earlier Year Books. Data for subsequent years regarding the number of females working on rural holdings in Australia are not available.

### Salaries and wages paid

Particulars of salaries and wages paid to employees (including amounts paid to contractors) working full-time on rural holdings are shown below for the year 1969-70. Data for New South Wales, and hence Australia, are not available.

#### EMPLOYEES ON RURAL HOLDINGS: SALARIES AND WAGES PAID(a) STATES AND TERRITORIES, 1969-70 (\$'000)

Employees	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Males and females—									
Permanent . . .	(b) {	29,731	41,501	16,690	21,194	8,625	3,515	526	n.a.
Temporary(c) . . .		29,428	47,192	14,887	19,518	5,500	553	168	
Total . . .		59,159	88,693	31,576	40,712	14,126	4,068	694	

(a) Includes value of keep. (b) Not available. (c) Includes amounts paid to contractors.

Similar information for Australia for years up to 1957-58 is given in Year Book No. 50, page 988, and in earlier Year Books. Particulars for subsequent years are not available.

### Persons residing permanently on holdings

Particulars of persons (of all ages) residing permanently on rural holdings in each State and Territory at 31 March 1970, and throughout Australia for a series of years, are as follows.

#### PERSONS (OF ALL AGES) RESIDING PERMANENTLY ON RURAL HOLDINGS STATES AND TERRITORIES, 31 MARCH 1970

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.(a)	A.C.T.	Aust.
Males . . .	147,008	131,161	97,082	54,833	46,807	21,368	3,416	424	502,099
Females . . .	128,807	116,384	81,145	48,824	38,867	19,313	2,234	374	435,948
Total . . .	275,815	247,545	178,227	103,657	85,674	40,681	5,650	798	938,047

(a) Includes Aborigines.

#### PERSONS (OF ALL AGES) RESIDING PERMANENTLY ON RURAL HOLDINGS AUSTRALIA, 31 MARCH 1966 TO 1970

	31 March				
	1966	1967	1968	1969	1970
Males . . . . .	533,039	529,378	525,754	516,365	502,099
Females . . . . .	461,683	457,507	455,050	447,809	435,948
Total . . . . .	994,722	986,885	980,804	964,174	938,047



## Farm machinery on rural holdings

The tables following show the principal types of farm machinery on rural holdings in the States and Territories at 31 March 1970. Additional information was published in the Statistical Bulletin *Farm Machinery on Rural Holdings, Australia, 31 March 1970*. A more detailed analysis of tractors on rural holdings according to type, horse-power, type of fuel used, and age of tractor was published in the Statistical Bulletin *Tractors on Rural Holdings—Australia, 31 March 1969*. Details of grain and seed harvesters on rural holdings at 31 March 1970, classified according to type of propulsion, width of cut, age and type of front were published in the statistical bulletin: *Grain and Seed Harvesters on Rural Holdings, 31 March 1970*.

## FARM MACHINERY ON RURAL HOLDINGS: STATES AND TERRITORIES, 31 MARCH 1970

Machinery	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cultivating—									
Mouldboard ploughs(a)—									
Trailing type . . . . .	8,965	10,844	4,987	6,164	2,038	1,925	12	31	34,966
Tractor-mounted type . .	12,383	10,437	6,350	2,924	1,434	3,653	19	55	37,255
Disc implements (including disc ploughs, disc cultivators, disc tillers and disc harrows)(a)—									
Trailing type . . . . .	35,794	28,453	25,970	13,548	17,121	5,169	128	97	126,280
Tractor-mounted type . .	18,021	17,613	19,439	4,310	3,260	3,803	53	30	66,529
Tyne implements(a)—									
Chisel ploughs, scarifiers, cultivators and rippers—									
Trailing type . . . . .	27,894	22,888	17,773	13,291	12,198	2,381	39	46	96,510
Tractor-mounted type . .	26,063	18,217	30,582	6,892	3,803	4,141	51	58	89,807
Tyne harrows (number of leaves)—									
Trailing type . . . . .	110,916	105,920	69,988	80,956	34,410	16,363	133	244	418,930
Tractor-mounted type . .	28,056	22,505	19,119	7,755	2,793	5,139	42	60	85,469
Rotary hoes and rotary tillers—									
Self-contained power unit . . . . .	8,303	7,033	2,717	3,494	1,671	1,240	46	33	24,537
Tractor-mounted or trailing type . . . . .	7,155	4,600	4,434	2,118	1,622	878	17	11	20,835
Seeding and planting—									
Grain drills—									
Combine type . . . . .	29,342	19,913	14,408	15,481	14,168	1,474	61	65	94,912
Other types . . . . .	5,669	8,646	2,012	4,953	3,499	2,387	10	28	27,204
Maize and cotton planters(b)	8,946	872	8,686	..	115	..	18	4	18,641
Fertiliser distributors and broadcasters—									
Rotary . . . . .	18,564	25,643	7,037	8,276	10,017 {	4,217	53	78	98,434
Direct drop . . . . .	6,532	4,384	10,372	1,460		1,763	9	29	
Harvesting—									
Grain and seed headers and harvesters(c)(d)—									
Self-propelled . . . . .	4,656	1,648	3,087	2,103	1,592	99	15	9	13,209
Tractor drawn . . . . .	15,093	11,669	4,414	9,115	9,317	529	12	21	50,170
Pick-up balers . . . . .	11,923	14,439	3,404	5,367	4,113	2,003	36	54	41,339
Forage harvesters . . . . .	2,945	2,104	1,429	914	644	348	22	11	8,417
Other—									
Shearing machines (number of stands) . . . . .	73,154	43,159	17,438	30,080	26,385	4,839	10	294	195,359
Milking machines (number of units) . . . . .	38,013	112,160	34,185	17,642	9,144	16,941	30	75	228,190
Tractors(d)—									
Wheel . . . . .	82,400	79,131	63,344	34,121	35,870 {	11,764	328	191	329,969
Crawler . . . . .	6,462	3,134	8,762	3,143		1,192	118	9	

(a) Collected triennially. Not shown in table next page.  
 planted simultaneously. (c) Excludes reapers, binders, specialised clover harvesters and forage harvesters. (d) See text above.

(b) Number of units, i.e. number of rows that can be

**FARM MACHINERY ON RURAL HOLDINGS: AUSTRALIA**  
**31 MARCH 1966 TO 1970**

<i>Machinery(a)</i>	<i>31 March—</i>				
	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
Rotary hoes and rotary tillers—					
Self-contained power unit . . . . . }	45,267	27,788	27,174	25,722	24,537
Tractor-mounted or trailing type . . . }		17,881	20,333	21,581	20,835
Seeding and planting—					
Grain drills—					
Combine type . . . . .	90,866	92,530	94,094	94,650	94,912
Other types . . . . .	30,401	29,605	29,634	28,490	27,204
Maize and cotton planters . . . . .	14,523	14,260	13,826	(b)18,495	(b)18,641
Fertiliser distributors and broad-casters . . . . .	86,409	93,064	95,853	97,119	98,434
Harvesting—					
Grain and seed headers and harvesters—					
Self-propelled . . . . . }	64,744	10,273	11,953	13,213	13,209
Tractor drawn . . . . . }		54,644	55,929	53,883	50,170
Pick-up bailers . . . . .	34,229	36,688	38,211	40,142	41,339
Forage harvesters . . . . .	6,385	7,214	7,545	8,016	8,417
Other—					
Shearing machines (number of stands) . . . . .	188,496	193,226	195,542	196,286	195,359
Milking machines (number of units) . . . . .	233,625	235,325	233,022	231,698	228,190
Tractors—					
Wheel . . . . . }	278,118	314,670	323,982	299,297	329,969
Crawler . . . . . }	22,741			24,299	

(a) See note (a) previous table. (b) Definition changed in 1969 when informants were asked to report in terms of numbers of units, i.e. the number of rows that can be planted simultaneously. Figures not strictly comparable with earlier years.

### The soils of Australia

Year Book No. 52 contains an article (pages 873–9) on the soils of Australia which deals with the following matters: nature and development of Australian soils, including the agricultural development of soils, and types of Australian soils. A soil map of Australia and illustrations are included on plates 47 to 51 of Year Book No. 52.

### Soil improvement and conservation

#### Fertilisers

The Australian output of prepared fertilisers is derived chiefly from imported rock phosphate. Complete information regarding local production of fertilisers is not available; but the production of superphosphate in Australia during 1969–70 amounted to 3,597,600 tons.

Information regarding the area treated with artificial fertilisers and the quantity of artificial fertilisers (superphosphate, bonedust, nitrates, etc.) used in each State during the 1969–70 season is given in the following table.

**AREA FERTILISED AND QUANTITY OF ARTIFICIAL FERTILISERS USED  
STATES AND TERRITORIES, 1969-70**

State or Territory	Crops			Pastures			Total		
	Area fertilised	Super-phosphate used	Other artificial fertilisers used	Area fertilised	Super-phosphate used	Other artificial fertilisers used	Area fertilised	Super-phosphate used	Other artificial fertilisers used
	'000 acres	tons	tons	'000 acres	tons	tons	'000 acres	tons	tons
New South Wales.	7,912	303,323	99,540	8,428	477,799	22,672	16,340	781,122	122,212
Victoria . . .	4,945	241,694	52,170	10,408	633,243	80,109	15,353	874,937	132,279
Queensland . .	1,433	44,711	203,793	360	32,856	11,015	1,793	77,568	214,808
South Australia .	5,284	280,969	26,406	4,962	276,229	6,657	10,245	557,198	33,063
Western Australia.	9,649	512,810	97,151	14,295	777,606	29,369	23,944	1,290,416	126,520
Tasmania . . .	220	21,204	12,265	1,473	111,255	8,925	1,693	132,459	21,190
Northern Territory	10	356	967	89	3,950	141	99	4,306	1,108
Australian Capital Territory . .	6	343	38	44	2,397	7	50	2,740	45
<b>Australia . . .</b>	<b>29,459</b>	<b>1,405,410</b>	<b>492,329</b>	<b>40,058</b>	<b>2,315,335</b>	<b>158,895</b>	<b>69,517</b>	<b>3,720,746</b>	<b>651,225</b>

Particulars of the quantity of artificial fertilisers used in each State and Territory during each of the seasons 1965-66 to 1969-70 are shown in the next table. These details include the quantity used for the top-dressing of pasture lands.

**QUANTITY OF ARTIFICIAL FERTILISERS USED: STATES AND TERRITORIES  
1965-66 TO 1969-70  
(Tons)**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1965-66	839,955	1,054,393	214,487	561,962	972,432	163,925	672	3,777	3,811,603
1966-67	864,569	1,113,392	242,615	598,808	1,096,555	169,756	681	3,393	4,089,769
1967-68	893,469	1,068,605	263,460	599,877	1,219,968	172,195	4,629	2,695	4,224,898
1968-69	897,893	954,807	264,973	580,756	1,323,293	160,462	5,117	2,195	4,189,496
1969-70	903,334	1,007,216	292,376	590,261	1,416,936	153,649	5,414	2,785	4,371,971

The chief sources of Australia's supplies of natural phosphate are Nauru, Christmas Island (Indian Ocean), Gilbert and Ellice Islands and Morocco. Sodium nitrate is obtained chiefly from Chile.

**ARTIFICIAL FERTILISERS: IMPORTS INTO AUSTRALIA, 1965-66 TO 1969-70**

Fertiliser	1965-66	1966-67	1967-68	1968-69	1969-70
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**QUANTITY  
(<sup>0</sup>000 cwt)**

Ammonium fertilisers . . .	1,311	1,973	2,893	2,193	637
Potassium fertilisers . . .	2,163	2,398	2,602	2,699	2,663
Natural phosphate . . .	55,901	65,436	65,916	63,531	52,986
Sodium nitrate . . .	153	99	161	103	100
Other . . .	335	885	887	1,603	547
<b>Total . . .</b>	<b>59,862</b>	<b>70,791</b>	<b>72,458</b>	<b>70,129</b>	<b>56,933</b>

**VALUE  
(\$<sup>0</sup>00 f.o.b.)**

Ammonium fertilisers . . .	2,841	4,161	5,016	3,813	1,715
Potassium fertilisers . . .	3,550	3,875	3,770	3,457	3,584
Natural phosphate . . .	21,543	29,050	32,162	31,606	28,109
Sodium nitrate . . .	393	249	390	255	327
Other . . .	1,181	2,698	3,219	4,247	1,888
<b>Total . . .</b>	<b>29,508</b>	<b>40,033</b>	<b>44,557</b>	<b>43,378</b>	<b>35,623</b>

Exports of fertilisers (manufactured locally) amounted to 249,000 cwt valued at \$934,000 in 1969-70 compared with 34,000 cwt valued at \$184,000 in 1968-69.

### Aerial agriculture

Extensive use is made of aircraft for top-dressing and seeding, for spraying and dusting of crops and pastures, and for pest and vermin extermination.

For 1956-57 (the first year for which data are available) the total area treated was 1,466,000 acres; in 1969-70 the total was 14,868,000 acres. The following table shows details of area treated and materials used for each State for the five years ended 31 March 1970.

**AERIAL AGRICULTURE, 1965-66 TO 1969-70**

Year ended 31 March	Area topdressed and seeded	Area sprayed	Total area treated(a)	Materials used		Total flying time
				Super- phosphate	Seed	
1970—	'000 acres	'000 acres	'000 acres	tons	'000 lb	hours
New South Wales(b)	6,076	1,521	8,158	293,737	2,094	48,823
Victoria	1,795	484	2,337	116,125	99	20,893
Queensland(d)	291	589	1,125	(c)	372	(c)
South Australia	609	281	901	39,598	(c)	6,065
Western Australia	(c)	(c)	(c)	65,309	145	13,219
Tasmania	(c)	(c)	(c)	(c)	(c)	(c)
Australia	10,270	3,723	14,868	550,952	2,854	102,619
1969	9,474	4,580	14,416	436,589	4,125	99,639
1968	10,495	(c)	14,348	524,374	3,249	102,112
1967	11,646	3,192	15,237	596,628	2,407	108,688
1966	11,314	3,469	15,010	588,045	1,581	108,850

(a) Includes other types of treatment (rabbit baiting, etc.). (b) Includes details for the Australian Capital Territory.  
(c) Not available for publication. (d) Includes details for the Northern Territory.

### Pasture improvement

An article on pasture improvement, which includes notes on indigenous and introduced species of grasses and which traces the development of pasture research in Australia, appears on pages 1001-2 of Year Book No. 49.

### Soil conservation

Year Book No. 49 contains an article (pages 1003-4) on soil conservation which deals with the following matters: land use and soil erosion, agents of erosion, prevention and control, and the activities of various Commonwealth and State authorities which promote and co-ordinate research into the problems of soil erosion and the initiation of preventive measures.

## AGRICULTURAL PRODUCTION

In general, statistics in this chapter relating to agricultural production are derived from returns supplied by approximately 252,000 farmers who utilise one acre or more of land for agricultural or pastoral purposes. The latest figures available are those for the year 1969-70. The returns are collected on a substantially uniform basis in all States at 31 March each year, and relate mainly to crops sown in the previous twelve months. Where harvests are not completed by March (e.g. potatoes), provision is made in some States for a special collection after the harvest is completed and in others for the inclusion of the total estimated yield expected from the complete harvest. In cases where additional data are available from marketing authorities or other sources these are used in conjunction with the annual census returns. The statistics published in this section are therefore shown in 'agricultural' years. For most purposes there will be little error involved in considering them as applying to years ended 30 June.

For more detailed information on period covered and details of the weights and measures used in recording production of agricultural commodities see introductory notes to the bulletin *Rural Industries*. Details of weights and measures are also included after the Contents of this Year Book.



# Progress, assistance and control

## Progress of cultivation

The following table shows the area of crops in each of the States and Territories of Australia at ten-yearly intervals since 1860-61 and during each of the ten seasons 1960-61 to 1969-70. Plate 37 in this chapter shows the area of crops in Australia from 1900-01 onward (page 748).

AREA OF CROPS: STATES AND TERRITORIES, 1860-61 TO 1969-70  
(<sup>0</sup>000 acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1860-61	246	387	4	359	25	153	..	..	1,174
1870-71	385	693	52	802	55	157	..	..	2,144
1880-81	606	1,549	114	2,087	64	141	..	..	4,561
1890-91	853	2,032	225	2,093	70	157	..	..	5,430
1900-01	2,447	3,114	458	2,370	201	224	..	..	8,814
1910-11	3,386	3,952	667	2,747	855	287	..	..	11,894
1920-21	4,465	4,490	780	3,231	1,805	297	..	2	15,070
1930-31	6,811	6,716	1,144	5,426	4,792	268	2	5	25,164
1940-41	6,375	4,467	1,734	4,255	4,027	254	..	6	21,118
1950-51	4,761	4,537	2,077	3,812	4,650	290	n.a.	6	20,133
1960-61	8,044	5,838	3,057	5,399	6,871	357	2	8	29,576
1961-62	8,288	5,626	3,216	5,024	7,112	364	2	7	29,639
1962-63	8,903	6,318	3,490	5,495	7,482	395	2	7	32,092
1963-64	8,997	6,102	3,665	5,975	6,915	380	3	8	32,045
1964-65	10,334	6,477	3,967	5,965	7,505	404	4	9	34,665
1965-66	9,052	6,219	4,119	6,030	8,680	386	4	8	34,498
1966-67	12,421	6,765	4,605	6,488	8,817	444	4	10	39,553
1967-68	12,985	6,250	4,928	6,430	9,138	423	6	7	40,168
1968-69	15,570	7,910	5,449	7,704	9,812	476	7	11	46,940
1969-70	14,623	6,599	5,438	6,935	9,905	413	9	9	43,930

## The Australian Agricultural Council

The influence of government and semi-government authorities on Australian rural industry is most apparent in the fields of guaranteed prices, subsidies and controlled marketing. Many of these aspects of intervention at the national level take place indirectly through the Australian Agricultural Council. This is a permanent organisation which was formed following a conference of Commonwealth and State Ministers on agricultural and marketing matters held at Canberra in December 1934. The Council consists of the Commonwealth Ministers for Primary Industry, Trade and Industry, Interior, and External Territories and the State Ministers of Agriculture, with power to co-opt the services of other Commonwealth and State Ministers as required. The principal functions of the Council are: the promotion of the welfare and development of agricultural industries generally; the exchange of information on agricultural production and marketing; the improvement of the quality of agricultural products and the maintenance of high grade standards; to ensure, as far as possible, balance between production and available markets; and organised marketing.

In addition, a permanent Standing Committee on Agriculture was formed to advise the Council, to secure co-operation and co-ordination in agricultural research, to advise State and Commonwealth Governments on the initiation and development of agricultural research, and to secure co-operation between all Governments in respect of quarantine measures against pests and diseases of plants and animals.

The Standing Committee on Agriculture comprises the permanent heads of the State Departments of Agriculture, the Secretary, Department of Primary Industry, and a representative each from the Commonwealth Departments of the Treasury, Health, Trade and Industry, Interior, External Territories, and from the Commonwealth Scientific and Industrial Research Organization.

## Financial assistance to primary producers

Financial assistance to primary producers by the Commonwealth Government may be provided in a number of ways. See also pages 538 and 550-2, Chapter 19, Public Finance. Examples of these follow.

**Bounties.** A bounty to producers, not exceeding \$4,000,000 in any one year, is currently paid on raw cotton produced in Australia. Commencing with the 1969 cotton crop the bounty is being phased out. In 1969 the total available was \$4,000,000; in 1970, \$3,000,000 and in 1971 \$2,000,000. Payments will cease after that time.

A bounty of \$27,000,000 paid annually on the production of butter, cheese and related butterfat products and an export bounty on processed milk products of a maximum of \$800,000 annually are both continued in the fifth Five Year Dairy Industry Stabilization Plan which commenced 1 July 1967. Under special arrangements for the year 1970-71 a grant of \$15,882,000 was made to the dairying industry for distribution as bounty on the production of butter and cheese, in addition to the existing bounty of \$27,000,000. A grant of \$3,379,000 was also made for 1970-71 as bounty on the export of skim powder milk, casein and other non-fat products (see page 818).

*Commitments to industry-financed stabilisation schemes.* In schemes of this nature the Commonwealth generally accepts a defined contingent liability to contribute to Government-approved stabilisation funds if falling prices, or rising costs, or both, lead to a situation where growers' contributions prove inadequate. The contribution by the Commonwealth to the Wheat Prices Stabilization Fund is an example.

Commonwealth payments are made to assist in control and eradication of diseases and pests by the various States and to provide natural disaster relief assistance.

Over recent years, legislative research schemes financed by matching contributions from the Commonwealth, and industry or States, or both, have been initiated in regard to tobacco, wool, wheat, dairy produce, meat, chicken meat, eggs, pigs, dried fruits and fish. On a similar financial basis, schemes have been operative in relation to other research projects, e.g. on fruit fly, plague locusts, and pest management in pome fruit orchards; grape crop forecasting; and wine, honey, barley, banana and vegetable research.

### **Agricultural research**

Each State Department of Agriculture has a number of research stations, investigating problems mainly of the regions in which they are located. In addition, a substantial amount of research and investigational work is carried out by these departments on farmers' properties. The work is supported by central laboratory and service facilities in capital cities, and increasingly also by research, analytical and diagnostic laboratories in the country areas. Research results are passed on to farmers through field days, meetings and publications, and through extension staff of the State Departments of Agriculture. In recent years, there has been increasing interest in economic interpretation of research results.

The Commonwealth Scientific and Industrial Research Organisation carries out research at field stations and laboratory facilities in many parts of Australia, and also undertakes developmental studies at national level. Its research programmes in the agricultural and livestock fields are generally designed to give information which is widely applicable in the Australian environment, and which may require further regional interpretation and adaptation in order that it may be of use to the farming industries. The Universities also carry out agricultural research at laboratory and field levels, in addition to their teaching functions.

For details of agricultural training see Chapter 20, Education, Cultural Activities and Research.

### **Extension services**

Agricultural extension services are provided by the States through their Departments of Agriculture, and in certain special fields by other State departments and authorities. Extension services also operate in the Northern Territory, Australian Capital Territory and Territory of Papua and New Guinea.

All State Departments of Agriculture have university or agricultural college trained officers located in country areas. They carry out advisory and educational activities in the farming community, through contact with individual farmers, and through group and general publicity channels. In recent years several States have placed agricultural economists in country areas, strengthening the economic and farm management content of extension.

Support for the field extension staff is provided by information service groups, by applied research teams and industry and subject matter specialist groups, and by diagnostic and analytical services. Some States have advisory staff specialising in agricultural mechanisation, and one State has begun to place extension method specialists in country areas.

Information services operated by Departments of Agriculture include agricultural journals, periodicals in various industry fields, pamphlets, newsletters, films, radio talks and television presentations. Group activities include discussion groups, field days, demonstrations, evening meetings and displays.

Since 1948 the Commonwealth has provided unmatched grants to the States to assist them in expanding their extension activities. In 1966, a programme of rapid expansion of this assistance beyond the existing provision of \$1.4 million per annum was undertaken, with \$21 million being made available during the subsequent five years. Provision for the next five year period beginning

in 1971 amounts to \$37 million. The Commonwealth Extension Services Grant is used mainly by State Departments of Agriculture, and its scope includes extension, regional research, information, economic services and training.

Extension type services are available from non-government sources. Some commercial firms and co-operatives provide extension or advisory services primarily for their clients. Over the past decade a new profession of farm management consultants has emerged, providing fee or contract services ranging from property assessment or supervision to detailed farm management and development plans. Farmers' needs and interests were demonstrated by an initial phase of grouping themselves together in farm management clubs to employ their own advisors.

### Distribution, production and value of crops

#### Distribution of crops

The wide range of climatic and soil conditions over the agricultural regions of Australia has resulted in a diversity of crops being grown throughout the Commonwealth. Generally, cereal crops (excluding rice and sorghum) are grown in all States over wide areas, while industrial crops are confined to specific locations in a few States. A graph showing the area sown to principal crops for the years 1900-01 to 1969-70 appears on plate 37, page 748.

AREA OF CROPS: STATES AND TERRITORIES, 1969-70  
(Acres)

Crops	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for grain—									
Barley—									
2-row . . .	307,735	460,905	379,184	1,325,751	407,707	28,603	..	..	2,909,885
6-row . . .	234,190	25,719	37,635	57,878	492,480	1,089	..	..	848,991
Maize . . .	80,780	1,145	(a)108,679	..	654	..	..	..	191,258
Oats . . .	903,202	883,651	75,161	371,576	1,139,430	22,167	..	895	3,396,082
Panicum, millet and setaria . . .	2,083	3,651	(a)66,864	..	..	..	..	..	72,598
Rice . . .	97,008	..	2,236	..	..	..	(c)	..	(d)99,244
Rye . . .	14,018	11,560	65	47,889	11,003	85	..	..	8,620
Sorghum . . .	245,180	840	(a)371,234	..	2,891	..	(c)	..	(d)620,145
Wheat . . .	8,622,652	3,298,254	1,504,049	3,209,733	6,788,177	14,732	(c)	2,693	23,440,290
Hay . . .	748,256	1,200,476	180,775	383,832	500,216	171,803	3,692	3,243	3,192,293
Green fodder . . .	2,888,756	364,354	1,631,259	1,294,788	383,083	89,445	1,058	1,407	6,654,150
Other stock fodder . . .	20,452	28,579	1,525	37,432	6,259	22,800	(b)	..	(d)117,047
Grass seed—									
Lucerne . . .	19,229	804	236	49,821	(e)	(e)	(e)	..	(d)70,090
Clover . . .	25,271	8,878	8,530	66,749	1,320	..	..	..	110,748
Other . . .	17,003	43,905	57,301	13,891	20,137	(f)3,162	2,713	100	158,212
Industrial crops—									
Broom millet . . .	1,535	210	(a)184	..	(b)	..	..	..	(d)1,929
Canary seed . . .	4,566	82	63,103	615	..	..	..	..	68,366
Cotton . . .	56,662	..	(a)13,329	..	7,210	..	..	..	77,201
Flax for linseed . . .	49,455	18,880	21,513	977	30,812	..	..	..	121,637
Hops . . .	..	(g)838	..	..	(b)1,472	..	..	..	(d)2,310
Peanuts . . .	232	..	(a)82,789	..	..	..	(b)	..	(d)83,021
Safflower . . .	16,022	50	9,475	(b)	1,203	..	..	..	(d)26,750
Sugar cane—									
For crushing . . .	19,838	..	505,978	..	..	..	..	..	525,816
Stand-over and cut for plants . . .	19,977	..	134,543	..	..	..	..	..	154,520
Sunflower . . .	22,730	3,067	(a)28,334	..	(b)	..	..	..	(d)54,071
Tobacco . . .	2,739	11,015	12,908	..	..	..	..	..	26,662
Other . . .	(b)	657	161	(b)	..	193	..	..	(d)1,011
Vegetables for human consumption—									
Onions . . .	1,485	3,296	2,998	2,026	302	192	(f)	(f)	(d)10,299
Potatoes . . .	25,865	39,765	17,712	8,021	6,332	9,367	(f)	(f)	(d)107,062
Other . . .	48,456	52,999	56,881	11,408	7,755	22,637	277	122	200,535
Vineyards—									
Bearing . . .	20,086	45,648	3,206	53,568	6,117	..	..	..	128,625
Not bearing . . .	5,336	4,190	408	11,269	531	..	..	..	21,734
Fruit—									
Bearing . . .	78,173	57,189	38,522	32,869	19,524	17,227	54	25	243,583
Not bearing . . .	17,153	13,694	14,526	11,932	4,606	3,930	17	13	65,871
Nurseries and cut flowers . . .	1,519	3,014	720	343	228	135	..	12	5,971
All other crops . . .	5,020	11,630	10,979	472	1,749	2,825	708	110	33,493
Total area . . .	14,622,664	6,598,885	5,434,471	6,934,621	9,905,155	413,184	8,519	8,620	43,926,119

(a) Sown 1968-69. (b) Not available for publication. Included in All other crops. (c) Not available for publication.  
 Excluded from totals. (d) Incomplete; see individual States. (e) Not available for publication, area included in  
 other grass seed. (f) Excludes area sown simultaneously to oats. (g) Includes 62 acres not bearing. (h) Includes  
 77 acres not bearing. (i) Not available for publication. Included in Other vegetables.



# AREA OF CROPS: AUSTRALIA 1900-01 TO 1969-70

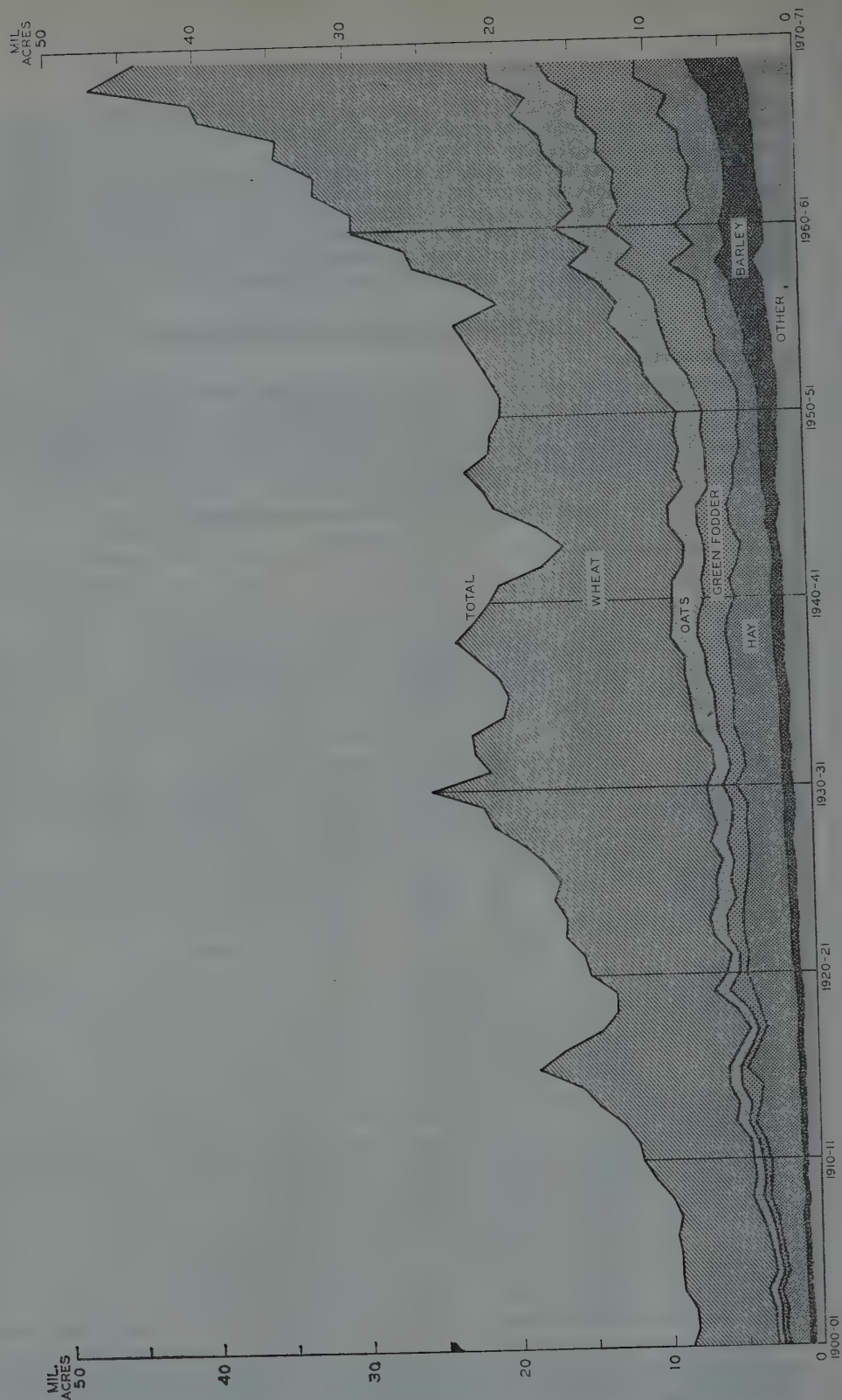


PLATE 37



## AREA OF CROPS: AUSTRALIA, 1965-66 TO 1969-70

('000 acres)

Crop	1965-66	1966-67	1967-68	1968-69	1969-70
Cereals for grain—					
Barley—					
2-row . . . . .	1,766	1,951	2,074	2,620	2,910
6-row . . . . .	531	546	538	694	849
Maize . . . . .	197	201	200	176	191
Oats . . . . .	3,768	4,258	3,380	3,872	3,396
Rice . . . . .	64	74	76	83	99
Sorghum . . . . .	433	502	462	583	620
Wheat . . . . .	17,515	20,823	22,441	26,799	23,440
Hay . . . . .	2,780	3,496	2,800	3,955	3,192
Green fodder . . . . .	5,324	5,399	5,916	5,714	6,654
Grass seed . . . . .	227	304	248	343	339
Industrial crops—					
Cotton . . . . .	55	53	77	80	77
Flax for linseed . . . . .	25	35	54	71	122
Hops . . . . .	2	2	2	2	2
Peanuts . . . . .	58	70	62	79	83
Safflower . . . . .	60	95	105	46	27
Sugar cane . . . . .	647	669	675	685	680
Tobacco . . . . .	23	22	23	26	27
Vegetables for human consumption—					
Onions . . . . .	8	10	10	11	10
Potatoes . . . . .	96	99	106	113	107
Other . . . . .	185	184	178	194	201
Vineyards . . . . .	140	139	140	143	150
Fruit . . . . .	313	313	311	310	309
All other crops . . . . .	282	308	292	339	431
<b>Total . . . . .</b>	<b>34,498</b>	<b>39,553</b>	<b>40,168</b>	<b>46,940</b>	<b>43,926</b>

## Production and yield per acre of crops

## PRODUCTION OF CROPS: STATES AND TERRITORIES, 1969-70

Crop	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for grain—									
Barley—									
2-row . . . '000 bus	6,788	10,787	6,928	29,227	6,863	1,060	..	..	61,652
6-row . . . . .	5,547	586	659	1,226	5,196	36	..	..	13,249
Maize . . . . .	4,006	72	(a)2,713	..	6	..	..	..	6,797
Oats . . . . .	19,238	25,927	950	6,665	15,463	455	..	25	68,723
Panicum, millet and setaria . . . . .	29	75	(a)634	..	..	..	..	..	739
Rice . . . . .	12,775	..	176	..	..	..	(b)	..	(c)12,951
Rye . . . . .	165	57	..	144	50	1	..	..	417
Sorghum . . . . .	6,011	23	(a)6,789	..	69	..	(b)	..	(c)12,892
Wheat . . . . .	162,786	83,544	14,898	59,159	66,700	353	(b)	73	(c)387,512
Hay . . . . . '000 tons	1,406	2,466	373	608	508	362	5	7	5,733
Grass seed—									
Lucerne . . . . . cwt	12,817	535	194	45,144	(b)	(b)	(b)	..	(c)58,690
Clover . . . . .	67,573	18,785	..	16,692	106,268	884	..	..	210,202
Other . . . . .	17,918	81,025	32,618	23,472	37,661	7,995	3,216	62	203,967
Industrial crops—									
Broom millet—									
Fibre . . . . . cwt	8,616	779	(a)815	..	(b)	..	..	..	(c)10,210
Grain . . . . . bus	5,698	685	n.a.	..	..	..	..	..	(c)6,383
Canary seed . . . . .	56,971	352	633,528	5,966	..	..	..	..	696,817
Cotton, unginned . . . '000 lb	138,783	..	(a)28,104	..	20,800	..	..	..	187,687
Flax for linseed . . . . . tons	14,499	9,352	5,701	355	6,186	..	..	..	36,093
Hops (dry weight) . . . . . cwt	..	15,355	..	..	(b)	24,964	..	..	(c)40,319
Peanuts . . . . .	4,039	..	(a)839,286	..	..	..	(b)	..	(c)843,325
Safflower . . . . . '000 bus	156	..	67	(b)	6	..	..	..	(c)230
Sugar cane for crushing . . . . . '000 tons	835	..	14,700	..	..	..	..	..	15,535
Sunflower . . . . . cwt	118,777	18,064	(a)92,692	..	(b)	..	..	..	(c)229,933
Tobacco, dried leaf . . . '000 lb	3,061	15,516	18,975	..	..	..	..	..	37,553
Vegetables for human consumption—									
Onions . . . . . tons	13,381	21,339	20,060	22,793	4,428	2,176	(b)	(b)	(c)84,177
Potatoes . . . . .	142,047	279,553	115,455	78,624	67,164	66,920	(b)	(b)	(c)749,763
Vineyards—									
Grapes—									
For drying . . . . .	59,076	292,565	..	26,333	2,266	..	..	..	380,240
For table . . . . .	8,568	11,057	5,695	1,294	3,135	..	..	..	29,749
For wine . . . . .	53,574	34,943	169	240,393	6,594	..	..	..	335,673

(a) Harvested from crop sown in 1968-69.

(b) Not available for publication.

(c) Incomplete; see individual States.

## PRODUCTION OF PRINCIPAL CROPS: AUSTRALIA, 1965-66 TO 1969-70

<i>Crop</i>		1965-66	1966-67	1967-68	1968-69	1969-70
<b>Cereals for grain—</b>						
Barley—						
2-row . . . . .	'000 bus	33,235	49,207	28,731	58,438	61,652
6-row . . . . .	"	8,600	12,381	8,067	14,149	13,249
Maize . . . . .	"	4,918	7,491	7,132	6,826	6,797
Oats . . . . .	"	60,739	107,106	39,628	94,250	68,723
Rice . . . . .	"	9,540	11,250	11,597	13,420	12,951
Sorghum . . . . .	"	7,149	11,713	10,582	15,831	12,892
Wheat . . . . .	"	259,666	466,610	277,289	543,950	387,512
Hay . . . . .	'000 tons	4,179	6,371	3,812	7,328	5,733
Grass seed . . . . .	cwt	356,815	488,477	317,303	513,164	472,859
<b>Industrial crops—</b>						
Cotton, unginned . . . . .	'000 lb	133,850	120,360	214,736	218,682	187,687
Flax for linseed . . . . .	tons	6,064	13,744	10,482	19,496	36,093
Hops (dry weight) . . . . .	cwt	36,463	28,907	36,752	42,757	40,319
Peanuts . . . . .	"	548,279	827,151	606,159	334,601	843,325
Safflower . . . . .	"	550	1,369	878	570	230
Sugar cane for crushing . . . . .	'000 tons	14,155	16,685	16,756	18,413	15,535
Tobacco (dried leaf) . . . . .	'000 lb	27,361	27,905	24,721	34,072	37,553
<b>Vegetables for human consumption—</b>						
Onions . . . . .	'000 tons	58	84	58	86	84
Potatoes . . . . .	"	639	643	658	798	750
<b>Vineyards—</b>						
Grapes . . . . .	"	582	684	629	545	746
Wine made (a) . . . . .	'000 gal	34,125	41,514	44,231	51,776	63,334
Dried vine fruits . . . . .	'000 tons	91	107	85	55	93

(a) Net factory and farm production of beverage and distillation wine. This excludes the liquid gallonage of spirits added in wine fortifying.

## YIELD PER ACRE OF PRINCIPAL CROPS: AUSTRALIA, 1965-66 TO 1969-70

<i>Crop</i>		1965-66	1966-67	1967-68	1968-69	1969-70
<b>Cereals for grain—</b>						
Barley—						
2-row . . . . .	bushels	18.8	25.2	13.9	22.3	21.2
6-row . . . . .	"	16.2	22.7	15.0	20.4	15.6
Maize . . . . .	"	25.0	37.2	35.6	38.8	35.5
Oats . . . . .	"	16.1	25.2	11.7	24.3	20.2
Rice . . . . .	"	148.1	152.6	152.7	161.2	130.5
Sorghum . . . . .	"	16.5	23.3	22.9	27.1	20.8
Wheat . . . . .	"	14.8	22.4	12.4	20.3	16.5
Hay . . . . .	tons	1.50	1.82	1.36	1.85	1.80
<b>Industrial crops—</b>						
Cotton, unginned . . . . .	lb	2,436	2,264	2,793	2,725	2,431
Flax for linseed . . . . .	tons	0.25	0.40	0.19	0.28	0.30
Hops (dry weight)(a) . . . . .	cwt	17.16	13.51	16.50	18.67	18.57
Peanuts . . . . .	"	9.50	11.86	9.82	4.26	9.73
Safflower . . . . .	bushels	9.12	14.47	8.40	12.29	8.58
Sugar cane for crushing(a) . . . . .	tons	28.13	29.93	30.30	32.39	29.54
Tobacco (dried leaf) . . . . .	lb	1,165	1,247	1,076	1,323	1,408
<b>Vegetables for human consumption—</b>						
Onions . . . . .	tons	7.04	8.27	5.94	7.62	8.17
Potatoes . . . . .	"	6.63	6.47	6.23	7.04	7.00
<b>Vineyards—</b>						
Grapes(a) . . . . .	"	4.58	5.37	4.92	4.28	5.80

(a) Per acre of productive crops.

**Value of agricultural production**

Further reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used may be found in the chapter Miscellaneous.

**GROSS VALUE(a) OF AGRICULTURAL PRODUCTION: AUSTRALIA, 1965-66 TO 1969-70**  
(\$'000)

<i>Crop</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Cereals for grain—					
Barley . . . . .	47,932	73,743	42,222	70,531	65,982
Maize . . . . .	9,517	10,395	9,463	9,733	9,839
Oats . . . . .	53,323	83,384	34,205	58,763	33,351
Rice . . . . .	10,224	12,445	12,831	14,358	14,533
Wheat . . . . .	384,853	689,880	435,443	731,334	547,253
Hay . . . . .	107,755	151,470	107,434	166,284	113,942
Green feed . . . . .	28,380	24,805	30,234	32,577	35,369
Industrial crops—					
Cotton, unginned . . . . .	14,323	12,468	19,675	20,715	18,642
Hops . . . . .	3,020	2,531	3,211	3,788	3,588
Sugar cane . . . . .	119,350	138,431	138,409	158,716	151,213
Tobacco (dried leaf) . . . . .	30,399	29,782	27,919	38,528	38,930
Vegetables for human consumption—					
Onions . . . . .	6,667	6,044	7,167	6,366	6,692
Potatoes . . . . .	43,751	41,233	51,985	43,399	40,575
Other vegetables for human consumption . . . . .	74,804	82,387	85,417	89,095	92,303
Grapes . . . . .	43,516	50,173	47,750	44,602	58,712
Fruit and nuts . . . . .	151,877	162,918	155,250	165,877	193,000
All other crops . . . . .	51,603	67,183	60,197	69,182	76,776
<b>Total . . . . .</b>	<b>1,181,294</b>	<b>1,639,273</b>	<b>1,268,812</b>	<b>1,723,849</b>	<b>1,500,700</b>

(a) Includes amounts paid as bounty, relief, etc.

Values of agricultural production in the various States and Territories are shown for 1969-70 in the following table. In computing the net value of production, no deduction has been made for the cost of maintenance of farm buildings and fences, nor for the depreciation of farm plant.

**GROSS, LOCAL AND NET VALUES OF AGRICULTURAL PRODUCTION**  
**STATES AND TERRITORIES, 1969-70**  
(\$'000)

<i>State or Territory</i>	<i>Gross production valued at principal markets</i>	<i>Marketing costs</i>	<i>Local value of production</i>	<i>Value of materials used in process of production</i>	<i>Net value of production (a)</i>
New South Wales . . . . .	479,500	122,580	356,920	(b)44,250	312,670
Victoria . . . . .	319,699	59,765	259,934	27,512	232,421
Queensland . . . . .	315,530	35,177	280,353	60,465	219,888
South Australia . . . . .	186,766	28,155	158,611	25,136	133,474
Western Australia . . . . .	155,938	29,267	126,670	42,489	84,182
Tasmania . . . . .	41,824	10,567	31,257	6,521	24,736
Northern Territory . . . . .	896	n.a.	896	n.a.	896
Australian Capital Territory . . . . .	547	50	498	24	474
<b>Australia . . . . .</b>	<b>1,500,700</b>	<b>285,561</b>	<b>1,215,139</b>	<b>206,397</b>	<b>1,008,741</b>

(a) No deduction has been made for depreciation and maintenance.  
power, power kerosene, petrol and other oils.

(b) No allowance has been made for costs of

## Wheat

Wheat is grown on a large scale in all States except Tasmania, and is the most important crop in Australia in terms of area, production and exports. The present limits of the wheat belt have been established after considerable fluctuation over the last four decades. In January 1934 a Royal Commission was appointed to inquire into and report upon the economic condition of the growing, handling and marketing of wheat, and the manufacturing, distributing and selling of flour and bread. The Report of this Royal Commission provides an authoritative description of all aspects of the industry up to that time.

### Wheat marketing and research

Two of the aspects of government and semi-government assistance and control which have contributed to the development of the industry are the organisation of overseas marketing and of research.

As a large proportion of the Australian wheat crop is normally exported, the marketing of wheat plays an important part in the industry. The Australian Wheat Board was constituted in September 1939, under National Security (Wheat Acquisition) Regulations, to purchase, sell, or dispose of wheat or wheat products, and to manage and control all matters connected with the handling, storage, protection, shipment, etc. of wheat acquired, and such other matters as were necessary to give effect to the regulations. Details of the operations of the Australian Wheat Board and the Wheat Stabilization Board in licensing wheat grown during the seasons 1941-42 to 1948-49 will be found in Year Book No. 38, pages 940-1, and a detailed survey of legislation relating to stabilisation of the wheat industry, including controls exercised during the 1914-18 and 1939-45 Wars and legislation establishing the Wheat Stabilization Plan in 1948, is given in the Appendix to Year Book No. 37, pages 1295-9.

The Wheat Stabilization Board ceased to function on 31 December 1948, and under the *Wheat Industry Stabilization Act* 1948 the Australian Wheat Board was reconstituted to administer the first stabilisation plan and was given powers similar to those held under the National Security Regulations. The new Board commenced to function on 18 December 1948. The Board has been continued in existence by the *Wheat Industry Stabilization Acts* 1954, 1958, 1963-66 and 1968 for the purpose of administering the second, third, fourth and fifth five year stabilisation plans. Details of the more recent plans were published in Year Book No. 40, pages 841 and 842 (1947-48 to 1952-53 Plan), No. 44, page 861 (1953-54 to 1957-58), No. 48, pages 903 and 904 (1958-59 to 1962-63) and No. 54, pages 868 and 869 (1963-64 to 1967-68).

*Fifth Post-war Wheat Industry Stabilisation Plan.* Following negotiations during 1968, the fifth post-war Wheat Industry Stabilisation Plan was enacted by the Commonwealth and States towards the end of 1968. The new plan operates on very much the same lines as the previous ones. However, there are some important changes in detail in the main features of the plan which are set out below.

The plan operates for five years. It commenced with the 1968-69 wheat crop and will end with the marketing of the 1972-73 crop.

The *Wheat Export Charge Act* 1968 repealed the *Wheat Export Charge Act* 1963 and provided for an export charge on wheat and wheat products for the seasons 1968-69 to 1972-73 inclusive. See also page 550, Chapter 19, Public Finance. The charge which may be levied is the excess of the average export return over the sum of the guaranteed price (*see below*) and five cents per bushel with a maximum charge of fifteen cents per bushel. The ceiling on the Wheat Prices Stabilisation Fund, into which this charge is paid, has been raised from \$60 million to \$80 million. Any excess beyond this figure is returned to growers on a 'first in, first out' basis.

Payments from the Wheat Prices Stabilisation Fund will be paid to the Australian Wheat Board when required, for the purpose of building up the average export price for any season to the guaranteed price. When the average export realisations fall below the guaranteed price the deficiency is made up first by drawing upon the Stabilisation Fund in respect of up to 200 million bushels of wheat from each crop. If the Fund is exhausted, the necessary deficiency payments will be made from the Commonwealth Government's Consolidated Revenue Fund. As the return from exports has been below the guaranteed price, there have been no collections of the wheat export charge since the 1956-57 No. 20 Pool when \$3,178,000 was collected. In fact, growers' money in the Fund was exhausted with the closure of the 1959-60 Pool, and since then the Commonwealth has been obliged to meet its commitment in respect of the export guarantee. Up to the payment on the 1968-69 Pool this has involved an amount totalling \$185 million.

The Commonwealth has guaranteed a price to growers applying to 200 million bushels of wheat exported from each crop during the period of the plan. The guaranteed price is subject to adjustment



in each year of the plan in accordance with changes in price of cash costs, rail freights and handling and storage charges. There will no longer be any adjustment for imputed costs such as interest on farmers' equity. The guaranteed price per bushel in the 1970-71 season is \$1.475 f.o.b. vessel, an increase of 1.6 cents on that of the previous season.

The Australian Wheat Board is retained as the sole constituted authority for the marketing of wheat within Australia and for the marketing of wheat and flour for export from Australia for the period of the plan.

Amending legislation, with effect from December 1969, gave the Australian Wheat Board discretionary power to sell wheat in Australia for purposes other than human consumption at prices below that set for human consumption but not less than the guaranteed price.

The home consumption price for 1970-71, the third year of the fifth plan, has been established at \$1.74 per bushel, bulk basis, f.o.r. ports for wheat for human consumption. Wheat for the manufacture of flour for industrial use is priced at \$1.45. The basic price for wheat for stock feed is \$1.55; however, any purchaser who undertakes to buy the whole of his wheat requirements for stock feed purposes from the Board throughout the year ending 30 November 1971 will be charged \$1.45 per bushel. These prices include a loading of 1.5 cents per bushel to cover the cost of transporting wheat from the mainland to Tasmania. There is provision in the plan for annual adjustments to be made to the home consumption price by the same amount as the guaranteed price is adjusted. The above prices are 1.5 cents per bushel higher than in 1969-70, except for the basic price of stock feed which rose by 5 cents per bushel. The 1969-70 prices included a loading of 1.6 cents per bushel to meet freight charges on wheat shipped to Tasmania.

#### Wheat delivery quotas plan

In March 1969 the Australian Wheat Growers' Federation put forward proposals for the allotment of quotas on deliveries of wheat to the Australian Wheat Board. The Federation's proposals were mainly designed to bring marketable supplies of wheat more into line with available outlets, following the record 1968-69 harvest. The proposals became effective for the 1969-70 harvest. State governments have the responsibility, for Constitutional reasons, of implementing the quota plan within the States and each State has enacted the necessary enabling legislation. The period of operation of the legislation varies among the States.

Quotas are subject to annual review. Wheat in excess of a quota may be received from a grower if storage space is available but 'quota wheat' will receive preference as far as receipt and subsequent sale by the Australian Wheat Board is concerned.

State quotas effective for the 1969-70 and 1970-71 seasons and those proposed by the Federation and agreed to by all parties for 1971-72 are given below:

	1969-70 mil. bus	1970-71 mil. bus	1971-72 mil. bus
<i>Basic—</i>			
New South Wales . . . . .	123	99	114
Victoria . . . . .	65	52	57
South Australia . . . . .	45	36	40
Western Australia . . . . .	86	83	76
Queensland . . . . .	25	25	27
	<hr/> 344	<hr/> 295	<hr/> 314
<i>Extra—</i>			
New South Wales durum . . . . .	..	..	2
New South Wales prime hard . . . . .	7	12	12
Queensland prime hard . . . . .	6	11	11
	<hr/> 357	<hr/> 318	<hr/> 339
<i>Total</i> . . . . .	<hr/> 357	<hr/> 318	<hr/> 339

Deliveries in 1969-70 and 1970-71 made within the quotas established received the usual first advance payment of \$1.10 per bushel for f.a.q. bulk wheat, f.o.r. ports basis. The same arrangement will apply to 1971-72 season's quota wheat. In addition, the quota plan provides that wheat received which is declared by the Australian Wheat Board to have been sold and paid for within the season will be treated as quota wheat of the season and receive a first advance payment.

The States are responsible for determining the method of allocation of individual quotas within their respective boundaries. The bases of quota allocation vary from State to State, but in the main, quotas are based on a farm's average deliveries over a recent period.

### Wheat standards

A description of the F.A.Q. (fair average quality) standard of wheat is given in issues of the Year Book up to No. 53 (*see*, for example No. 53 page 902). However, over recent years there has been an extension of the system and Australian wheat is now marketed under eleven main different and distinct classifications. Each reflects the climatic and growing characteristics of its region of origin and also the particular characteristics of the varieties of wheat cultivated.

For each classification, samples of wheat are obtained each year and are mixed to give a representative sample of that grade. From these samples, which are representative of all the wheat of a particular classification grown in that region, standards for each grade are established; the bushel weight is determined by the use of the Schopper 1-litre scale chondrometer. This standard is used as the basis for sales of each grade and varies from year to year and from State to State. The eleven main different classifications of wheat are:

Queensland prime hard	Victorian F.A.Q.
New South Wales prime hard	South Australian F.A.Q.
South Australian hard	Western Australian F.A.Q.
Queensland F.A.Q.	Western Australian soft
New South Wales northern hard	Victorian soft
New South Wales southern-western F.A.Q.	

The several F.A.Q. grades, while possessing some characteristics in common, vary in protein content, milling characteristics, and dough qualities, and all are distinct grades. Similarly, the prime hard, hard, and soft grades are individual grades segregated for specific end uses.

Australia currently produces a full range of wheats for all purposes from high protein hard wheats to low protein soft wheats.

### Bulk handling and storage of wheat

A detailed description of the bulk handling system, including its advantages and disadvantages compared with other methods of handling, appears on pages 954-8 of Year Book No. 39.

New South Wales, Victoria and Western Australia have operated bulk handling systems for a number of years, and in more recent years other States have also introduced bulk systems. The bodies concerned with the administration of bulk handling in the various States are: Grain Elevators Board of New South Wales, Victorian Grain Elevators Board, State Wheat Board (Queensland), South Australian Co-operative Bulk Handling Ltd, Co-operative Bulk Handling Ltd. (Western Australia), and the Tasmanian Grain Elevators Board.

### WHEAT: TOTAL CAPACITY OF BULK HANDLING FACILITIES(a) STATES, 30 NOVEMBER 1966 TO 1970

(Source: Bulk handling authorities in the various States. *See above*)  
(<sup>0</sup>000 bushels)

State	1966	1967	1968	1969	1970
New South Wales . . . . .	(b)141,182	(b)132,792	184,972	212,600	234,000
Victoria(c) . . . . .	105,038	105,514	108,090	130,000	132,340
Queensland . . . . .	19,213	24,987	30,600	34,800	36,200
South Australia . . . . .	43,328	58,362	73,050	(d)95,486	(d)94,876
Western Australia . . . . .	134,898	144,487	159,677	183,787	203,000
Tasmania . . . . .	1,060	1,060	1,060	1,060	1,060
Australia . . . . .	444,719	467,202	557,449	655,633	701,476

(a) Includes terminals, sub-terminals, country installations, and temporary storage. (b) Storage at beginning of season. (c) Includes storage in southern New South Wales operated by the Victorian Grain Elevators Board. (d) Includes current contracts.

Particulars of the operation of the bulk handling and storage systems in each State are set out on pages 916 and 917 of Year Book No. 48.

### International Wheat Agreement

Details of the first and second International Wheat Agreements operative from 1 August 1949 to 31 July 1953, and from 1 August 1953 to 31 July 1956, respectively, were published in Year Book No. 42 (*see* pages 840-1) or previous issues. Details of the third, fourth and fifth International Wheat

Agreements which covered the periods from 1 August 1956 to 31 July 1959, 1 August 1959 to 31 July 1962 and 1 August 1962 to 31 July 1968 were published in Year Books 43 (page 836), 48 (page 906) and 55 (page 836) respectively.

### International Grains Arrangement

In August 1967 agreement was reached on a new International Grains Arrangement to operate for a period of three years from 1 July 1968. Details of the Arrangement were published in Year Book No. 55 (see page 836).

### Research into the wheat industry

Details of research into the Wheat Industry were published in Year Book No. 55 and previous issues. To the end of June 1970, the Wheat Industry Research Council (set up by the Commonwealth Government) and the Wheat Industry Research Committees (set up in the wheat-growing States) had spent \$15,173,000 including grants to the Commonwealth Scientific and Industrial Research Organization, State Departments of Agriculture, universities and agricultural colleges.

### Wheat farms: number and classification by activity

Particulars of the number of farms growing twenty acres and upwards of wheat for grain during each of the years 1965-66 to 1969-70 are shown in the following table. A farm worked on the share system or as a partnership is included as one holding only.

NUMBER OF FARMS GROWING TWENTY ACRES AND UPWARDS  
OF WHEAT FOR GRAIN: STATES AND A.C.T., 1965-66 TO 1969-70

State or Territory	1965-66	1966-67	1967-68	1968-69	1969-70
New South Wales . . . . .	16,150	19,575	20,619	21,340	20,610
Victoria . . . . .	11,355	11,202	11,056	11,722	11,620
Queensland . . . . .	4,941	5,674	5,867	6,063	4,982
South Australia . . . . .	9,387	9,419	8,905	9,884	9,529
Western Australia . . . . .	9,044	8,897	8,746	8,964	8,922
Tasmania . . . . .	213	194	159	239	203
Australian Capital Territory . . . . .	13	25	20	27	16
<b>Australia . . . . .</b>	<b>51,103</b>	<b>54,986</b>	<b>55,372</b>	<b>58,239</b>	<b>55,882</b>

There is in Australia a widespread combination of wheat growing with other rural activities. This is illustrated, for all States and for Australia, in respect of the 1965-66 season, in a series of statistical bulletins: *Classification of Rural Holdings by Size and Type of Activity*, 1965-66, Nos 1 to 7. These publications also contain details of numbers of rural holdings classified according to area of wheat for grain. A series of bulletins for the year 1968-69 are in course of preparation.

### Varieties of wheat sown

The breeding of wheat suitable to local conditions has long been established in Australia. Farrer (1845-1905) did invaluable work in pioneering this field, and the results of his labour and the continued efforts of those who have followed him have proved of immense benefit to the industry. Their efforts have resulted in the development of disease-resistant varieties, better average yields, and a greater uniformity of sample, with which have accrued certain marketing advantages, as well as an improvement in the quality of wheat grown. More than 1,000 different varieties of Australian wheats have been catalogued by the Commonwealth Scientific and Industrial Research Organization, but the number of principal varieties grown in any one season is restricted to about forty-five.

The principal varieties of wheat sown and the percentage of each to the total area sown in the five main wheat-producing States of Australia in 1969-70 were as follows: New South Wales, Heron (24.1), Timgalen (12.1), Olympic (10.5); Victoria, Insignia (45.2), Olympic (22.6), Heron (9.3); Queensland, Mendos (34.3), Timgalen (21.6), Gamut (16.7); South Australia, Heron (39.4), Insignia (including Insignia 49) (22.8); and Western Australia, Gamanya (51.3), Falcon (14.6), Insignia (9.6). A detailed table of wheat varieties sown appears in the annual bulletin *The Wheat Industry* (see No. 118, published in April 1971).

### Wheat area, production and yield per acre

Prominent factors in the early development of the wheat industry were the increase in population following the discovery of gold and the redistribution of labour after the surface gold had been won,



The economic depression of 1893 interrupted its progress, but its subsequent recovery was assisted by the invention of mechanical appliances, the use of superphosphates as an aid to production, and the introduction of new and more suitable varieties of wheat for Australian conditions. The establishment of closer settlement schemes and the settling of returned soldiers and others on the land were additional factors in its expansion.

**WHEAT FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE  
STATES AND AUSTRALIAN CAPITAL TERRITORY, 1965-66 TO 1969-70**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>AREA ('000 ACRES)</b>								
1965-66 . . .	4,577	3,074	954	2,745	6,150	14	1	17,515
1966-67 . . .	7,135	3,138	1,227	2,960	6,347	13	3	20,823
1967-68 . . .	8,215	3,224	1,477	2,864	6,647	12	2	22,441
1968-69 . . .	9,962	3,984	1,789	3,748	7,295	17	4	26,799
1969-70 . . .	8,623	3,298	1,504	3,210	6,788	15	3	23,440
<b>PRODUCTION ('000 BUSHEL)(a)</b>								
1965-66 . . .	39,117	60,591	17,429	39,976	102,156	368	28	259,666
1966-67 . . .	202,501	70,896	35,730	53,816	103,195	385	87	466,610
1967-68 . . .	87,323	28,317	27,417	26,899	106,975	316	42	277,289
1968-69 . . .	215,119	90,728	42,000	83,160	112,450	410	84	543,950
1969-70 . . .	162,786	83,544	14,898	59,159	66,700	353	73	387,512
<b>YIELD PER ACRE (BUSHEL)(a)</b>								
1965-66 . . .	8.5	19.7	18.3	14.6	16.6	26.1	20.8	14.8
1966-67 . . .	28.4	22.6	29.1	18.2	16.3	30.2	32.5	22.4
1967-68 . . .	10.6	8.8	18.6	9.4	16.1	26.3	17.8	12.4
1968-69 . . .	21.6	22.8	23.5	22.2	15.4	23.6	20.1	20.3
1969-70 . . .	18.9	25.3	9.9	18.4	9.8	23.9	27.0	16.5

(a) 60 lb per bushel.

A graph showing the area sown to wheat for grain in Australia since 1900-01 appears on plate 37 of this Year Book, and a map showing the distribution of areas growing wheat for grain throughout Australia in 1962-63 appears on page 1013 of Year Book No. 50. Similar maps showing the distribution of wheat areas in 1924-25, 1938-39, 1947-48, and 1954-55 appeared respectively in Year Books No. 22, page 695, No. 34, page 451, No. 39, pages 977-8, and No. 43, page 833.

The size of the wheat harvest in Australia is determined largely by the nature of the season, resulting in considerable year-to-year fluctuations in production. The main wheat-producing States of Australia are New South Wales, Western Australia and Victoria. Tasmania imports wheat from the mainland to satisfy its needs, though it exports flour made from local wheat which is particularly suitable for biscuits. The production of wheat and the yield per acre from 1935-36 is shown in Plate 38, page 757.

#### Price of wheat

The prices charged, per bushel, by the Australian Wheat Board for wheat sold for human consumption in Australia and for wheat sold as stock feed were as follows: year ended 30 November 1968 \$1.66; 1969, \$1.71; 1970, \$1.725; and 1971, \$1.74 for wheat to millers and \$1.55 for wheat sold for stock feed. These prices include a loading to meet freight charges incurred on wheat shipped to Tasmania (1.50 cents in 1967 and 1968; 1.0 cents in 1969; 1.6 cents in 1970 and 1.5 cents in 1971).

The Wheat Board's monthly basic export selling prices for f.a.q. bulk wheat f.o.b. basis, both for wheat sold under the International Wheat Agreement and for 'free' wheat sold on the open market fell in the following ranges; season ended 30 June 1967, \$1.51 to \$1.60; 1968, \$1.41 to \$1.49; 1969, \$1.38 to \$1.43; 1970, \$1.28 to \$1.39.

A new *International Wheat Agreement* came into force on 1 August 1962, covering the period of three years till 31 July 1965. This agreement was twice extended to cover the twelve monthly periods to 31 July 1966 and 31 July 1967 respectively. The agreement was further extended by protocol, in respect of its administrative provisions only, for a further period of one year from 1 August 1967.



# WHEAT FOR GRAIN: AUSTRALIA

## 1935-36 TO 1969-70

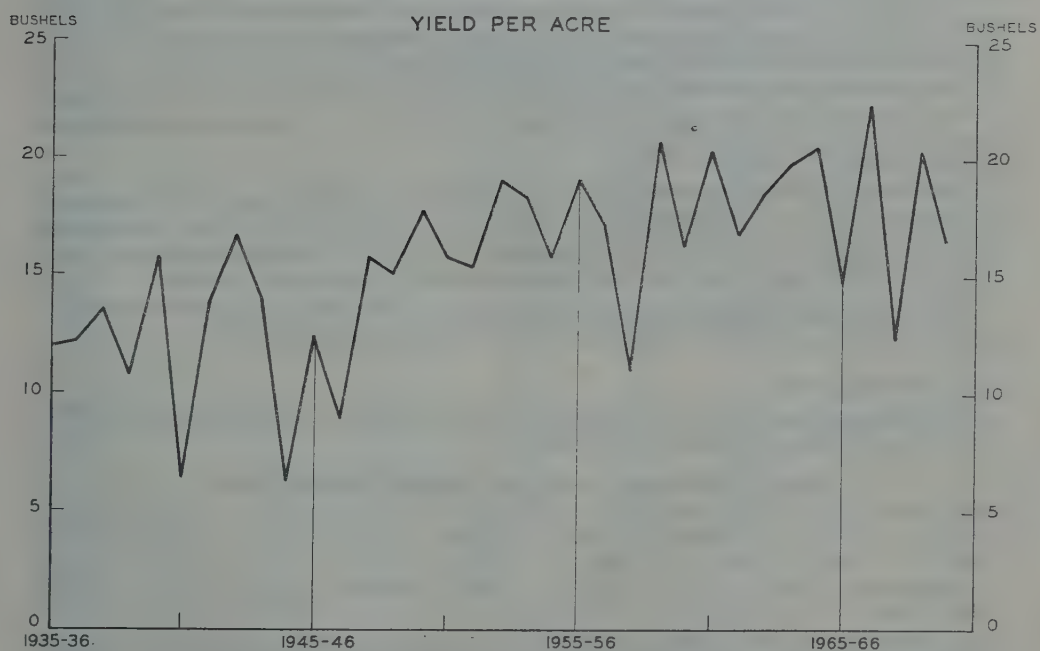
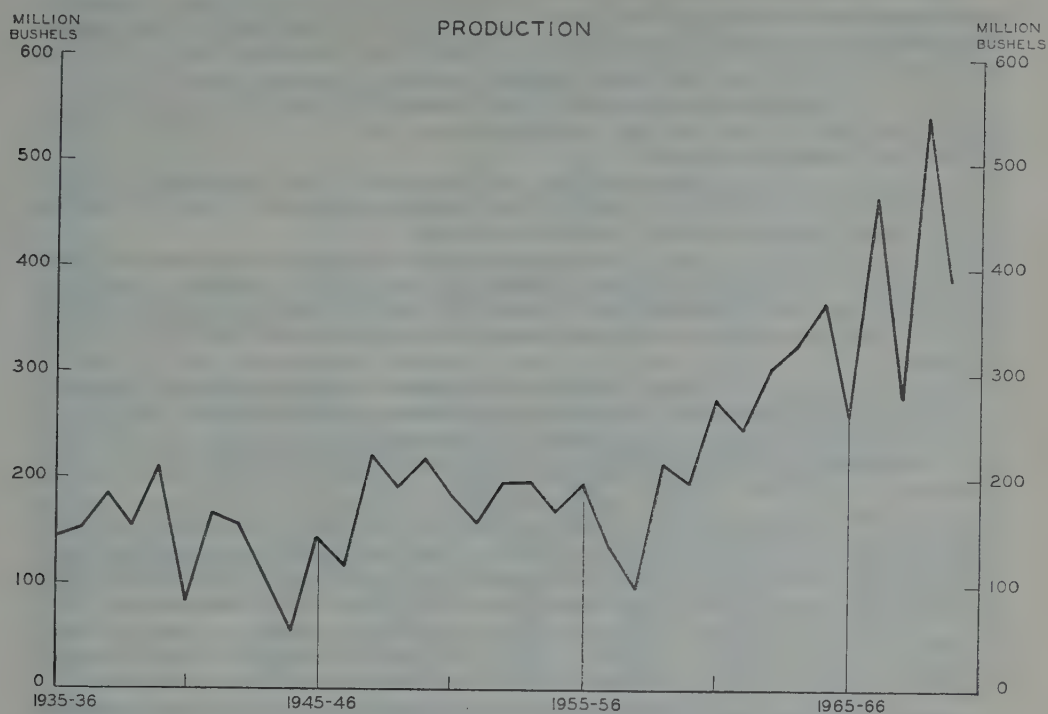


PLATE 38

The 1962 agreement continued, with some important variations, the arrangements covered by earlier agreements. It sought to obtain an element of stability in world wheat marketing by providing that a significant proportion of wheat entering international trade would be bought and sold at prices within a prescribed range. The agreed price range referred to No. 1 Manitoba Northern Wheat in bulk in store at Fort William/Port Arthur, expressed in terms of 'Canadian currency per bushel, at the parity of the Canadian dollar determined for the purposes of the International Monetary Fund as at 1 March 1949'. The prescribed range under the agreement was 202.5 cents (Canadian) maximum and 162.5 cents (Canadian) minimum.

In August 1967 agreement was reached on a new International Grains Arrangement to operate for a period of three years from 1 July 1968. The new arrangement consists of two legal instruments, the Wheat Trade Convention and the Food Aid Convention.

The Wheat Trade Convention seeks to continue the orderly marketing arrangements which have been developed over a series of International Wheat Agreements, whilst introducing a number of important new elements and improvements. It preserves the institutional and administrative structures of previous wheat agreements and will be administered by the International Wheat Council and its Secretariat.

The convention goes further than earlier wheat agreements in regard to pricing provisions. In contrast with previous agreements, which specified minimum and maximum prices for only one type of wheat, the convention specifies minimum and maximum prices for 14 types. The basic wheat is now United States Hard Red Winter No. 2 Ordinary Protein, the minimum price for which has been fixed at \$US1.73 per bushel f.o.b. from loading ports in the Gulf of Mexico. The minimum price per bushel for No. 1 Manitoba Northern Wheat is now \$US1.95 f.o.b. Gulf ports, and for Australian f.a.q. wheat \$US1.68 f.o.b. Gulf ports. It is estimated that, after allowing for quality differentials and for the change in geographical basing points, the general level of minimum prices is approximately 19 US cents per bushel above the minimum prices in the 1962 International Wheat Agreement. The maximum price for each type of wheat is 40 US cents above the minimum.

The convention provides for the establishment of a Prices Review Committee, on which Australia is represented. The committee will conduct a continuous review of world wheat prices and is empowered to initiate action to restore market stability when prices approach the agreed limits.

The convention continues the arrangement in the 1962 agreement whereby the member importing countries undertake to buy each year from the member exporting countries a specified percentage of their total commercial purchases of wheat. Exporting countries undertake that wheat will be made available at prices consistent with the price range and will not be sold below minimum prices to any purchaser whether a member of the arrangement or not. Member countries importing wheat from non-member countries undertake to do so at prices consistent with the price range. When prices are at the maximum of the range, exporters agree to supply to member importing countries, at prices not above the maximum, certain minimum quantities of wheat based on the importing country's historical purchases. A provision is also included under which member countries undertake to conduct any concessional transactions in grains in such a way as to avoid harmful interference with normal patterns of commercial trade.

The Food Aid Convention provides for a programme of food aid to developing countries amounting in total to 4.5 million metric tons of grains for human consumption in each of the three years of the arrangement. Australia's contribution has been fixed at 225,000 metric tons annually (8,267,000 bushels of wheat) which is approximately 5 per cent of the total contribution. Donor countries are free to specify the country or countries to which the grain may be supplied.

The International Grains Arrangement expires on 30 June 1971. Negotiations towards the formulation of a new agreement have been concluded, but details are not yet available.

### Value of the wheat crop

The estimated gross value of the wheat crop in each State and in Australia during the season 1969-70 and the value per acre are shown below.

WHEAT FOR GRAIN: VALUE OF CROP(a), STATES, 1969-70

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(b)
Aggregate value	\$'000	231,111	116,747	20,016	84,814	93,988	471	547,253
Value per acre	\$	26.80	35.40	13.30	26.42	13.85	31.97	23.35

(a) Gross value of total crop, including wheat used for seed and for stock feed on farms. Also includes payment of \$29,120,000 by the Commonwealth Government. (b) Includes the Australian Capital Territory.

**Production and disposal of wheat in Australia**

In the following tables details are given of Australian Wheat Board transactions and of total production and disposal of wheat during each of the years ended 30 November 1966 to 1970.

**AUSTRALIAN WHEAT BOARD**  
**WHEAT RECEIVED, STATES, 1965-66 TO 1969-70 HARVESTS**  
('000 bushels)

Harvest	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1965-66 . . . . .	27,554	60,904	13,701	36,160	95,837	217	234,373
1966-67 . . . . .	184,644	74,607	32,884	50,007	96,823	247	439,212
1967-68 . . . . .	73,005	27,814	24,367	22,084	99,946	154	247,369
1968-69 . . . . .	196,828	94,673	38,798	79,447	105,679	210	515,635
1969-70 . . . . .	145,709	85,883	11,975	55,693	58,702	181	358,143

Stocks of wheat (including flour in terms of wheat) held by the Australian Wheat Board in each State at 30 November for the years 1966 to 1970 are shown in the following table. These data relate to stocks held at mills, sidings, ports, and depots as recorded by the Australian Wheat Board.

**AUSTRALIAN WHEAT BOARD: STOCKS(a) OF WHEAT (INCLUDING FLOUR IN**  
**TERMS OF WHEAT), STATES, 30 NOVEMBER 1966 TO 1970**  
('000 bushels)(b)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1966 . . . . .	3,406	6,020	343	2,623	3,626	529	16,547
1967 . . . . .	43,238	22,709	596	8,160	5,285	536	80,524
1968 . . . . .	10,148	13,298	688	6,791	20,580	353	51,858
1969 . . . . .	84,660	61,897	6,802	46,093	66,731	570	266,752
1970 . . . . .	98,686	77,927	2,620	45,534	44,381	614	269,761

(a) Held at mills, sidings, ports and depots. Excludes new season's wheat received from growers prior to 30 November of years shown. (b) One short ton (2,000 lb) of flour is taken as being equivalent to 46.3 bushels of wheat.

Particulars of the disposal of wheat during the years ended 30 November 1966 to 1970 are shown in the following table.

**WHEAT: PRODUCTION AND DISPOSAL, AUSTRALIA, 1966 TO 1970**  
(million bushels)(a)

	Year ended 30 November—				
	1966	1967	1968	1969	1970
Opening stocks (including flour) (b)(c)(d) . . . . .	24.4	16.5	80.5	51.9	266.8
Production . . . . .	259.7	466.6	277.3	544.0	387.5
<i>Total available supplies</i> . . . . .	284.1	483.1	357.8	595.9	654.3
Exports—					
Wheat . . . . .	163.5	293.1	187.7	219.0	278.1
Flour(b) . . . . .	16.2	19.7	19.1	15.0	16.7
Breakfast foods and other products(b)(d) . . . . .	0.7	0.9	1.0	1.9	2.2
Local consumption—					
Flour(b)(d) . . . . .	44.2	43.8	45.0	44.5	45.4
Breakfast foods and other products(b)(d) . . . . .	2.4	1.8	2.4	1.7	1.4
Stock feed wheat sales(d) . . . . .	20.3	15.6	22.6	9.8	11.8
Seed . . . . .	19.1	20.9	24.5	21.7	13.9
Balance retained on farm (for other than seed use) . . . . .	6.2	6.5	5.4	6.7	15.2
Closing stocks (including flour)(b)(c)(d) . . . . .	16.5	80.5	51.9	266.8	265.3
<i>Total disposals</i> . . . . .	288.7	483.2	359.6	587.1	650.0
Excess (+) or deficiency (−) of disposals in relation to available supplies(e) . . . . .	+4.6	+0.1	+1.8	−8.8	−4.3

(a) One short ton (2,000 lb) of flour is taken as being equivalent to 46.3 bushels of wheat. (b) In terms of wheat. (c) Held at ports, depots, mills, and sidings. (d) Source: Australian Wheat Board. (e) Includes allowance for unrecorded movements in stocks, gain or loss in out-turn, etc. and in differences related to the timing of official export statistics.

The *Wheat Industry Stabilization Act* 1948 empowered the Minister to arrange with the Commonwealth Bank for advances to the Board, the advances being guaranteed by the Commonwealth Government. These provisions have been continued in the subsequent legislation, with the exception that advances are now arranged through the Reserve Bank.

**AUSTRALIAN WHEAT BOARD: FINANCIAL OPERATIONS, 1965-66 TO 1969-70**  
(\$'000)

	No. 29 Pool	No. 30 Pool	67/68 Pool	68/69 Pool(a)	69/70 Pool(a)
	(1965-66 Harvest)	(1966-67 Harvest)	(1967-68 Harvest)	(1968-69 Harvest)	(1969-70 Harvest)
Paid to growers . . . . .	294,886	542,965	321,719	548,050	328,451
Rail freight . . . . .	34,605	76,538	42,009	90,673	57,340
Expenses . . . . .	30,688	32,317	62,506	62,506	55,111
<i>Total payments</i> . . . . .	<i>349,962</i>	<i>650,191</i>	<i>396,045</i>	<i>701,229</i>	<i>440,902</i>
Value of sales delivered . . . . .	(b)334,718	(c)635,781	(d)353,793	(e)671,649	(f)408,350

(a) Incomplete. (b) Subject to additional \$16,154,000 provided by the Commonwealth Government and payment of \$586,000 to Wheat Industry Research Fund. (c) Subject to additional \$15,508,000 provided by the Commonwealth Government and payment of \$1,098,000 to Wheat Industry Research Fund. (d) Subject to an additional \$42,870,000 to be provided by the Commonwealth Government and payment of \$618,000 to Wheat Industry Research Fund. (e) Subject to an estimated additional \$30,868,000 to be provided by the Commonwealth Government and payment of \$1,288,000 to Wheat Industry Research Fund. (f) Subject to an estimated additional \$33,330,000 to be provided by the Commonwealth Government and payment of \$778,000 to Wheat Industry Research Fund.

Details of earlier pools will be found in previous issues of the Year Book.

### Imports of wheat

Wheat and flour have been imported in substantial quantities on three occasions since 1900; in 1902-3 the wheat harvest was only 12,378,000 bushels, and wheat and flour equivalent to 12,468,000 bushels of wheat were imported. An equivalent of 7,279,000 bushels was imported in 1914-15 to supplement the yield of 25 million bushels produced in that season. Owing to drought conditions in 1957-58 supplies of high protein wheat were insufficient for local requirements and, as a result, 1,485,000 bushels were imported from Canada in 1958. No wheat has since been imported.

### Exports of wheat and flour

Statistics in the following three tables are for years ended 30 June and relate to the exports of *Australian produce* only.

**WHEAT AND FLOUR: EXPORTS, AUSTRALIA, 1965-66 TO 1969-70**

Year	Quantity				Value		
	Wheat	Flour(a)		Total (in terms of wheat)	Wheat	Flour(a)	Total
		As flour	In terms of wheat(b)				
	'000 bushels	short tons	'000 bushels	'000 bushels	\$'000 f.o.b.	\$'000 f.o.b.	\$'000 f.o.b.
1965-66 . . . . .	189,479	416,201	19,270	208,749	264,062	26,526	290,588
1966-67 . . . . .	239,051	379,352	17,564	256,615	361,227	24,600	385,827
1967-68 . . . . .	238,778	406,847	18,837	257,613	342,767	25,303	368,070
1968-69 . . . . .	179,707	379,267	17,560	197,267	258,334	23,822	282,156
1969-70 . . . . .	253,019	355,932	16,480	269,499	337,570	23,011	360,581

(a) White flour (plain and self-raising), sharps and wheatmeal for baking. (b) One short ton (2,000 lb) of flour is taken as being equivalent to 46.3 bushels of wheat.



**WHEAT: EXPORTS TO VARIOUS COUNTRIES, AUSTRALIA, 1965-66 TO 1969-70**  
(<sup>0</sup>000 bushels)

<i>Country to which exported</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Chile . . . . .	..	1,725	6,271	3,849	2,912
China (mainland) . . . . .	74,131	79,523	88,781	43,431	92,489
India . . . . .	6,650	14,721	25,299	2,784	4,345
Japan . . . . .	13,357	15,851	22,484	42,149	37,261
Kuwait . . . . .	798	2,809	2,529	2,493	3,028
Lebanon . . . . .	1,157	5,130	3,497	3,167	3,116
Malaysia . . . . .	(a)3,758	9,244	9,374	9,299	10,403
Netherlands . . . . .	..	4,406	4,479	5,935	6,195
Pakistan . . . . .	1,569	25,863	1,148	865	5,496
Peru . . . . .	..	848	3,041	5,668	5,514
Singapore . . . . .	(b)4,479	7,403	9,297	3,924	7,674
United Kingdom . . . . .	23,293	14,233	23,622	28,412	37,644
Other(c) . . . . .	60,287	57,295	38,956	27,731	36,942
<b>Total . . . . .</b>	<b>189,479</b>	<b>239,051</b>	<b>238,778</b>	<b>179,707</b>	<b>253,019</b>

(a) Includes Singapore to 30 September 1965. (b) Included in Malaysia to 30 September 1965. (c) Includes particulars of shipments made 'for orders' which could not be classified to countries.

The following table shows the exports of flour to various countries for each of the years 1965-66 to 1969-70. The figures relate to exports of white flour (plain and self-raising), sharps and wheatmeal for baking.

**FLOUR(a): EXPORTS TO VARIOUS COUNTRIES, AUSTRALIA, 1965-66 TO 1969-70**  
(Short tons)

<i>Country to which exported</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Burma . . . . .	..	..	..	..	11,057
Ceylon . . . . .	170,083	144,982	160,620	143,005	98,320
Fiji . . . . .	34,219	24,642	33,735	35,323	34,625
Indonesia . . . . .	3,086	24,766	65,564	58,595	69,413
Libya . . . . .	487	1,504	1,036	8,488	11,581
Malawi . . . . .	6,192	7,413	10,483	6,464	8,958
Mauritius . . . . .	11,817	12,147	17,372	17,004	20,178
Muscat and Oman . . . . .	4,731	5,255	5,587	5,800	6,182
Papua and New Guinea . . . . .	14,889	16,139	17,804	18,158	20,318
Saudi Arabia . . . . .	16,692	12,111	17,183	15,019	7,923
Trucial States . . . . .	8,114	8,489	12,207	10,840	16,413
United Kingdom . . . . .	33,075	19,411	11,090	9,156	7,628
Other(b) . . . . .	112,816	102,493	54,166	51,415	43,336
<b>Total . . . . .</b>	<b>416,201</b>	<b>379,352</b>	<b>406,847</b>	<b>379,267</b>	<b>355,932</b>

(a) One short ton (2,000 lb) of flour is taken as being equivalent to 46.3 bushels of wheat. (b) Includes particulars of shipments made 'for orders' which could not be classified to countries.

**World area and production of wheat**

The figures in the following table of the world area and production of wheat by principal countries and by continents have been compiled from statistics published by the International Wheat Council. Harvests in the northern hemisphere occur in the first of the two years mentioned in each column heading, and in the southern hemisphere at the end of that year and the beginning of the next. Harvests of the northern hemisphere countries are thus combined with those of the southern hemisphere which immediately follow; e.g. in 1969-70 the Canadian harvest occurred from August to September 1969 and the Australian harvest from October 1969 to February 1970.

# **WHEAT: AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES 1967-68 TO 1969-70**

*(Source for countries other than Australia: International Wheat Council—World Wheat Statistics)*

Continent and country	Area			Production			Yield per acre		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
	'000 acres	'000 acres	'000 acres	mill. bus	mill. bus	mill. bus	bus	bus	bus
Africa . . . . .	19,768	21,535	20,930	225	294	247	11.3	13.6	11.8
Asia—									
China (mainland)(a) . . . . .	60,500	61,776	58,070	845	772	819	14.0	12.5	14.1
India . . . . .	31,723	37,061	39,433	419	608	685	13.2	16.4	17.4
Pakistan . . . . .	13,385	14,977	15,511	161	238	247	12.0	15.9	15.9
Turkey . . . . .	20,045	20,270	20,386	372	353	386	18.5	17.4	18.9
<i>Total, Asia(b)</i> . . . . .	<i>156,278</i>	<i>164,003</i>	<i>164,103</i>	<i>2,244</i>	<i>2,429</i>	<i>2,563</i>	<i>14.4</i>	<i>14.8</i>	<i>15.6</i>
Europe—									
France . . . . .	9,709	10,107	9,998	525	551	534	54.1	54.5	53.4
Germany, Federal Re- public of . . . . .	3,494	3,618	3,692	214	228	221	61.2	63.0	59.7
Italy . . . . .	9,914	10,576	10,420	353	355	351	35.6	33.5	33.6
Spain . . . . .	10,534	9,761	9,153	208	195	167	19.7	20.0	18.3
<i>Total Europe(b)</i> . . . . .	<i>68,996</i>	<i>70,264</i>	<i>69,499</i>	<i>2,660</i>	<i>2,660</i>	<i>2,573</i>	<i>38.6</i>	<i>37.9</i>	<i>37.0</i>
North and Central America—									
Canada . . . . .	30,121	29,422	24,968	593	650	684	19.7	22.1	27.4
United States . . . . .	58,771	55,262	47,555	1,522	1,576	1,459	25.9	28.5	30.7
<i>Total North and       Central America(b)</i> . . . . .	<i>91,009</i>	<i>86,610</i>	<i>74,428</i>	<i>2,194</i>	<i>2,293</i>	<i>2,224</i>	<i>24.1</i>	<i>26.5</i>	<i>29.9</i>
Oceania—									
Australia . . . . .	22,441	26,799	23,440	277	544	388	12.4	20.3	16.5
<i>Total, Oceania(b)</i> . . . . .	<i>22,745</i>	<i>27,115</i>	<i>23,719</i>	<i>293</i>	<i>560</i>	<i>402</i>	<i>12.9</i>	<i>20.7</i>	<i>16.9</i>
South America—									
Argentina . . . . .	14,362	14,423	12,810	269	211	250	18.7	14.6	19.5
<i>Total South America(b)</i> . . . . .	<i>18,903</i>	<i>20,386</i>	<i>19,422</i>	<i>348</i>	<i>311</i>	<i>363</i>	<i>18.4</i>	<i>15.3</i>	<i>18.7</i>
U.S.S.R. (Europe and Asia) . . . . .	165,624	166,128	163,830	2,840	3,432	3,013	17.1	20.7	18.4
<i>World total(b)</i> . . . . .	<i>543,323</i>	<i>556,041</i>	<i>535,881</i>	<i>10,804</i>	<i>11,978</i>	<i>11,386</i>	<i>19.9</i>	<i>21.5</i>	<i>21.2</i>

(a) International Wheat Council estimate. (b) Includes allowances for any missing data for countries shown and for other producing countries not shown.

## Principal wheat exporting and importing countries

The following table shows world exports of wheat and wheat flour (in terms of wheat) by the major wheat exporting countries, according to continents and countries of primary destination, based on statistics recently published by the International Wheat Council. While Australia's production of wheat has averaged about three per cent of the world's total during recent years, its exports account for a much higher proportion of the total quantities shipped. For the three years ended 1969-70, Australia's share of the world wheat exports has averaged 13 per cent.

# WORLD EXPORTS OF WHEAT AND WHEAT FLOUR IN TERMS OF WHEAT 1965-66 TO 1969-70

(Source: International Wheat Council—*World Wheat Statistics*)

(Million bushels)

Year and country of primary destination	Exporting country							Total
	Argentina	Australia	Canada	E.E.C.	U.S.A.	U.S.S.R.	Other	
1969-70—								
Africa—								
United Arab Republic . . . . .	..	..	1.6	63.0	0.5	6.5	19.3	90.9
Other . . . . .	1.5	12.8	8.0	40.2	41.8	1.5	2.6	108.3
<i>Total, Africa</i> . . . . .	1.5	12.8	9.6	103.2	42.3	8.0	21.9	199.2
Asia(a)—								
China (Mainland) . . . . .	..	89.9	67.2	28.1	..	..	..	185.2
India . . . . .	2.0	4.3	11.4	5.4	85.1	..	..	108.2
Japan . . . . .	..	36.0	39.2	1.2	87.5	..	..	164.0
Korea, Republic of . . . . .	..	..	1.4	0.2	40.3	..	..	41.9
Pakistan . . . . .	..	..	2.3	6.0	36.3	..	..	44.6
Other . . . . .	0.3	58.4	11.2	37.4	122.2	30.4	16.6	276.5
<i>Total, Asia</i> . . . . .	2.3	188.6	132.7	78.4	371.4	30.4	16.6	820.5
Europe(a)—								
Czechoslovakia . . . . .	..	..	..	17.0	..	39.7	..	56.7
Germany, East . . . . .	..	..	..	0.1	..	51.6	..	51.7
Italy . . . . .	14.8	..	14.7	..	9.2	4.9	..	43.6
Netherlands . . . . .	1.0	4.3	7.3	..	25.8	4.2	..	42.5
Poland . . . . .	..	..	2.6	2.2	0.4	38.7	..	43.9
United Kingdom . . . . .	0.8	39.4	48.0	38.4	11.8	12.3	17.1	167.9
Other . . . . .	2.5	5.3	34.8	17.5	34.1	12.8	12.6	119.4
<i>Total, Europe</i> . . . . .	19.0	48.9	107.5	75.2	81.3	164.2	29.7	525.8
North and Central America	0.3	0.2	26.2	4.5	19.3	10.8	0.3	61.5
Oceania . . . . .	..	4.4	..	0.7	0.1	..	..	5.3
South America—								
Brazil . . . . .	35.7	..	..	..	34.5	..	6.5	76.6
Other . . . . .	14.9	11.5	8.0	0.1	55.3	3.0	10.1	102.8
<i>Total South America</i> . . . . .	50.6	11.5	8.0	0.1	89.7	3.0	16.6	179.5
U.S.S.R. . . . .	..	..	40.6	..	1.5	..	..	40.6
All other . . . . .	..	..	0.7	..	..	..	5.1	7.3
<b>World Total, 1969-70(b)</b> . . . . .	<b>73.7</b>	<b>266.4</b>	<b>325.3</b>	<b>262.1</b>	<b>605.5</b>	<b>216.3</b>	<b>90.2</b>	<b>1,839.6</b>
1968-69(b) . . . . .	102.3	196.2	319.6	169.0	539.8	198.3	111.4	1,636.7
1967-68 . . . . .	50.3	257.6	327.1	206.1	742.1	186.8	143.6	1,913.7
1966-67 . . . . .	112.4	256.6	545.0	174.4	734.1	151.6	88.4	2,062.5
1965-66 . . . . .	292.0	208.7	545.0	230.2	859.7	80.9	79.4	2,296.0

(a) Excludes U.S.S.R., details for which are shown separately. (b) Years prior to 1968-69 include European Economic Community intra-trade.

The above particulars are based on customs clearances of the exporting countries, and relate to years ended 30 June. There are small differences between Australian exports as shown and those on pages 760-1 due in part to the use by the International Wheat Council of a slightly different factor to convert flour to wheat equivalent.

## Oats

This cereal is widely grown in all agricultural areas which have autumn, winter and spring rainfall; it is tolerant of wet conditions and heavy soils. It has excellent feed value and produces a higher yielding crop than other winter cereals. It needs less cultivation, but requires ample fertiliser. Oats has a variety of uses—as a pasture plant when rough sown into stubble or heavy clover pastures, as silage if cut before maturity, as a hay crop when mown and baled or cut for chaff, or as a grain when stripped (the stubble then being grazed off). The grain is sold on a 'fair average quality' basis through voluntary pools in Victoria, South Australia and Western Australia.

**Oats area, production and yield per acre**

Oats is usually next in importance to wheat among the grain crops cultivated in Australia. However, while wheat grown for grain in 1969-70 accounted for 56 per cent of the area of all crops, oats grown for grain represented only 8 per cent.

**OATS FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE  
STATES AND AUSTRALIAN CAPITAL TERRITORY, 1965-66 TO 1969-70**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
AREA ('000 ACRES)								
1965-66 . . . . .	1,033	966	45	455	1,240	28	1	3,768
1966-67 . . . . .	1,363	1,079	66	509	1,204	36	2	4,258
1967-68 . . . . .	907	723	31	525	1,158	35	1	3,380
1968-69 . . . . .	1,185	991	55	516	1,092	31	1	3,872
1969-70 . . . . .	903	884	75	372	1,139	22	1	3,396
PRODUCTION ('000 BUSHEL)(a)								
1965-66 . . . . .	12,607	17,784	735	5,622	23,279	677	37	60,739
1966-67 . . . . .	41,003	31,248	1,467	10,276	22,117	948	47	107,106
1967-68 . . . . .	8,235	6,859	450	3,299	19,759	1,014	12	39,628
1968-69 . . . . .	27,454	30,230	1,119	11,895	22,942	583	27	94,250
1969-70 . . . . .	19,238	25,927	950	6,665	15,463	455	25	68,723
YIELD PER ACRE (BUSHEL)(a)								
1965-66 . . . . .	12.2	18.4	16.3	12.4	18.8	23.9	25.6	16.1
1966-67 . . . . .	30.1	29.0	22.1	20.2	18.4	26.4	26.2	25.2
1967-68 . . . . .	9.1	9.5	14.6	6.3	17.1	28.7	20.3	11.7
1968-69 . . . . .	23.2	30.5	20.3	23.1	21.0	18.5	22.4	24.3
1969-70 . . . . .	21.3	29.3	12.6	17.9	13.6	20.5	28.1	20.2

(a) 40 lb per bushel.

Graphs showing the area sown to oats and production of oats in Australia appear on pages 993 and 995 of Year Book No. 49, and a map showing the distribution of areas growing oats for grain throughout Australia in 1962-63 appears on page 1015 of Year Book No. 50. The area sown to oats from 1900-01 is shown in plate 37, page 748 and the production of oats from 1935-36 is shown in plate 39, page 768.

Production of oats in 1969-70, 68,723,000 bushels was 36 per cent below the record production in 1966-67. Yield per acre was 20.2 bushels, compared with the record yield per acre of 25.2 bushels in 1966-67.

**Value of oat crop**

The average wholesale price in the Melbourne market for oats of good milling quality was \$0.53 per bushel in 1969-70, compared with \$0.72 in 1968-69. The estimated gross value of the oat crop in each State for the 1969-70 season and the value per acre were as follows.

**OATS FOR GRAIN: VALUE OF CROP, STATES, 1969-70**

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(a)</i>
Aggregate value . \$'000	12,312	10,495	950	3,303	5,910	365	33,351
Value per acre . \$	13.63	11.88	12.64	8.89	5.19	16.47	9.82

(a) Includes the Australian Capital Territory.



## Exports of oats

## OATS: EXPORTS, AUSTRALIA, 1965-66 TO 1969-70

		1965-66	1966-67	1967-68	1968-69	1969-70
Quantity	'000 bus	13,825	22,134	10,033	18,373	12,086
Value	\$'000 f.o.b.	11,980	17,450	8,408	13,042	7,559

In 1969-70 the principal countries of destination were Japan (4,721,000 bushels), the Federal Republic of Germany (2,537,000 bushels), the Netherlands (2,242,000 bushels), Italy (1,393,000 bushels) and Malaysia (425,000 bushels).

## World production of oats

The world production of oats for the year 1969, according to figures issued by the United States Department of Agriculture, amounted to 2,852 million bushels, harvested from 78.3 million acres, resulting in an average yield of 36.4 bushels an acre. This compared with an estimated production in the previous year of 3,493 million bushels from an area of 76.3 million acres and an average yield of 45.8 bushels an acre.

## Barley

This cereal contains two main groups of varieties, 2-row and 6-row. The former is generally, but not exclusively, preferred for malting purposes. Barley was formerly stubble-sown, but is now grown principally on pasture land worked up early in the year of sowing. In this way it forms an important phase in the rotation of crops. Like oats, it may also be sown for fodder production or for grain. When sown for fodder, sowing may take place either early or late in the season, as it has a short growing period. It may thus provide grazing or fodder supplies when other sources are not available. Barley grain may be crushed to meal for stock (especially pigs) or sold for malting.

Crops sown for malting purposes require well-worked, weed-free paddocks of even soil, and are thus restricted to specific districts. The main barley-growing areas in Australia are situated in South Australia (Murray-Mallee, Eyre and Yorke Peninsulas), but considerable quantities are grown also in New South Wales, Victoria, Queensland and Western Australia.

## Barley Boards

The bulk of the barley crop in the various States is acquired and marketed by grower-controlled boards. Pooled returns from sales are distributed to growers at standard rates for the individual grades and varieties delivered. The Victorian and South Australian crops are marketed by the Australian Barley Board (a joint board established by the two State Governments), and the Queensland and Western Australian Barley Boards handle the crops of their respective States. Particulars of the proportion of barley production which was received by the Australian Barley Board (for Victoria and South Australia), together with details of quantity sold, advances and total payments to growers, are presented below.

AUSTRALIAN BARLEY BOARD: BARLEY RECEIVED, SOLD, ETC.  
1965-66 TO 1969-70

<i>Pool</i>	<i>Quantity received</i>	<i>Quantity sold(a)</i>	<i>Total advances per bushel(b)</i>	<i>Net payments to growers</i>
	'000 bushels	'000 bushels	\$	\$'000
No. 27 (1965-66 Crop)	14,922	14,894	1.1993	14,824
" 28 (1966-67 " )	22,043	22,026	1.1940	22,759
" 29 (1967-68 " )	7,985	7,975	1.1912	7,511
" 30 (1968-69 " )	27,280	27,218	0.9681	21,765
" 31 (1969-70 " )	31,429	31,176	0.8000	(c)19,651

(a) Includes surplus or shortage in out-turn except for No. 31 Pool for which the sales are not yet complete. (b) 2-row No. 1 Grade (bulk) less freight. (c) As at 30 April 1971. At that date it was estimated that the amount still to be paid to growers was 5 cents per bushel.

**Barley area, production and yield per acre**

There was a substantial increase in the area of barley sown for grain (particularly in Western Australia and Queensland) in the years up to 1960-61, and in that year the area sown reached the then record level of 2,830,000 acres. However, the area sown in 1969-70, 3,759,000 acres, was 33 per cent more than the area in 1960-61. The production of barley for grain in 1969-70, 74,901,000 bushels, was a record and was 3 per cent more than the previous record production of 72,588,000 bushels in 1968-69. The area, production and yield per acre of barley for grain in the several States for the years 1965-66 to 1969-70, are shown in the following table. Separate details for 2-row and 6-row varieties are shown for all States for 1969-70.

**BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE  
STATES AND AUSTRALIAN CAPITAL TERRITORY, 1965-66 TO 1969-70**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>AREA ('000 ACRES)</b>								
1965-66 . . .	236	192	338	1,098	413	20	..	2,298
1966-67 . . .	385	228	384	1,107	373	21	..	2,498
1967-68 . . .	367	305	342	1,157	416	24	..	2,611
1968-69 . . .	486	409	427	1,412	553	26	..	3,314
1969-70—								
2-row . . .	308	461	379	1,326	408	29	..	2,910
6-row . . .	234	25	38	58	492	1	..	849
<i>Total</i> . . .	<i>542</i>	<i>487</i>	<i>417</i>	<i>1,384</i>	<i>900</i>	<i>30</i>	<i>..</i>	<i>3,759</i>

<b>PRODUCTION ('000 BUSHEL)(a)</b>								
1965-66 . . .	3,801	3,218	9,137	18,514	6,481	684	..	41,835
1966-67 . . .	11,796	5,421	13,194	23,698	6,707	772	..	61,588
1967-68 . . .	4,834	2,709	8,965	12,380	7,027	884	..	36,798
1968-69 . . .	11,212	8,885	12,869	29,551	9,187	884	..	72,588
1969-70—								
2-row . . .	6,788	10,787	6,928	29,227	6,863	1,060	..	61,652
6-row . . .	5,547	586	659	1,226	5,196	36	..	13,249
<i>Total</i> . . .	<i>12,335</i>	<i>11,373</i>	<i>7,587</i>	<i>30,454</i>	<i>12,058</i>	<i>1,095</i>	<i>..</i>	<i>74,901</i>

<b>YIELD PER ACRE (BUSHEL)(a)</b>								
1965-66 . . .	16.1	16.7	27.0	16.9	15.7	34.4	..	18.2
1966-67 . . .	30.6	23.8	34.4	21.4	18.0	36.7	..	24.7
1967-68 . . .	13.2	8.9	26.2	10.7	16.9	36.8	..	14.1
1968-69 . . .	23.1	21.7	30.1	20.9	16.6	33.7	..	21.9
1969-70—								
2-row . . .	22.1	23.4	18.3	22.0	16.8	37.0	..	21.2
6-row . . .	23.7	22.8	17.5	22.2	10.6	32.8	..	15.6
<i>Total</i> . . .	<i>22.8</i>	<i>23.4</i>	<i>18.2</i>	<i>22.0</i>	<i>13.4</i>	<i>36.9</i>	<i>..</i>	<i>19.9</i>

(a) 50 lb per bushel.

For Australia, 77 per cent of the area of barley for grain in 1969-70 was sown with 2-row barley. The proportion, however, varied considerably in the several States. The utilisation of barley during the season ended November 1970 was as follows: exports, 30,034,000 bushels; malting and distilling, 14,500,000 bushels; pearl barley, 124,000 bushels; seed, 5,200,000 bushels.

A graph showing the production of barley in Australia since 1935-36 is shown in plate 39, page 768, and a map showing the distribution of barley growing areas throughout Australia in 1962-63 appears on page 1014 of Year Book No. 50. The area sown to barley from 1900-01 is shown in plate 37, page 748.

### Value of barley crop

The average wholesale price for 2-row English malting barley in the Melbourne market was \$1.44 per bushel in 1969-70 compared with \$1.52 in 1968-69. The estimated gross value of the barley crop in each State for the 1969-70 season and the value per acre are shown in the following table.

BARLEY FOR GRAIN: VALUE OF CROP, STATES, 1969-70

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
Aggregate value .	\$'000	12,872	11,060	8,147	23,724	8,874	1,305	65,982
Value per acre .	\$	23.75	22.72	19.55	17.15	9.85	43.95	17.55

### Exports of barley

South Australia is the principal exporting State, and China (Taiwan), Italy, Japan and the United Kingdom were the principal countries to which barley was shipped in 1969-70. Particulars of exports of Australian-produced barley for the years 1965-66 to 1969-70 are shown in the following table.

BARLEY: EXPORTS, AUSTRALIA, 1965-66 TO 1969-70

		1965-66	1966-67	1967-68	1968-69	1969-70
Quantity . . .	'000 bus	9,994	18,718	5,701	19,871	27,880
Value . . .	\$'000 f.o.b.	11,508	21,569	6,569	18,246	22,766

In addition to exports of barley grain, there are also exports of Australian pearl and Scotch barley, the total for 1969-70 amounting to 363,000 lb, valued at \$12,000, the main countries of consignment being Malaysia and Papua and New Guinea.

### Barley malt

Details of the recorded usage of barley and the production of barley malt in the years 1965-66 to 1969-70 are given in the following table.

BARLEY MALT: GRAIN USED AND MALT PRODUCED, AUSTRALIA  
1965-66 TO 1969-70

		1965-66	1966-67	1967-68	1968-69	1969-70
Barley used . . .	'000 bus(a)	12,883	13,601	13,003	n.a.	n.a.
Malt produced . . .	'000 bus(b)	13,235	14,027	13,547	n.a.	n.a.

(a) 50 lb per bushel. (b) 40 lb per bushel.

Since 1952-53 the production of malt in Australia has been sufficient to meet local requirements and to provide a margin for export. Exports of Australian produce amounting to 3,971,000 bushels (value \$7,628,000) and 5,103,000 bushels (value \$8,894,000) were recorded in 1968-69 and 1969-70 respectively.

### World production of barley

In comparison with the barley production of other countries that of Australia is extremely small. The main producers in 1969 were the Union of Soviet Socialist Republics, the United States of America, France and the United Kingdom. China (Mainland) is also normally a major producer, but details for 1969 are not available. Australian production in that year was approximately 1.5 per cent of the world total.

# PRODUCTION OF OATS, BARLEY AND RAW SUGAR

AUSTRALIA, 1935-36 TO 1969-70

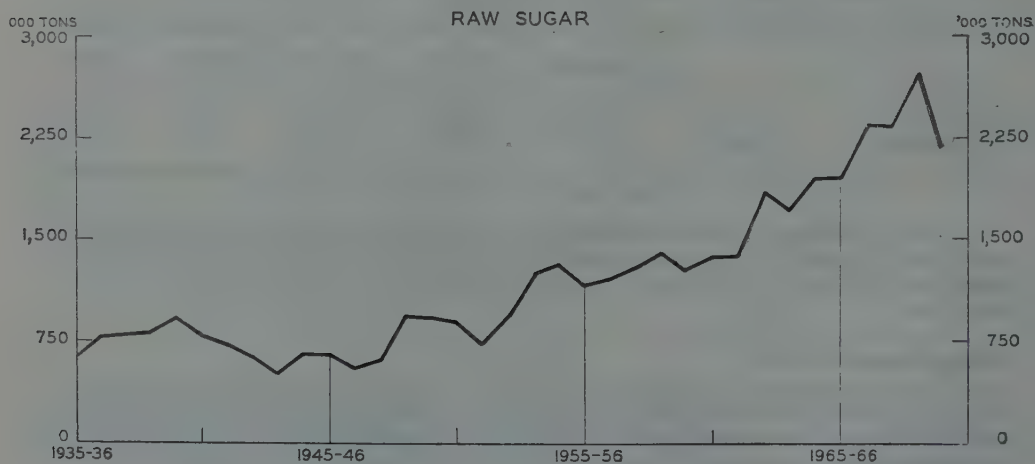
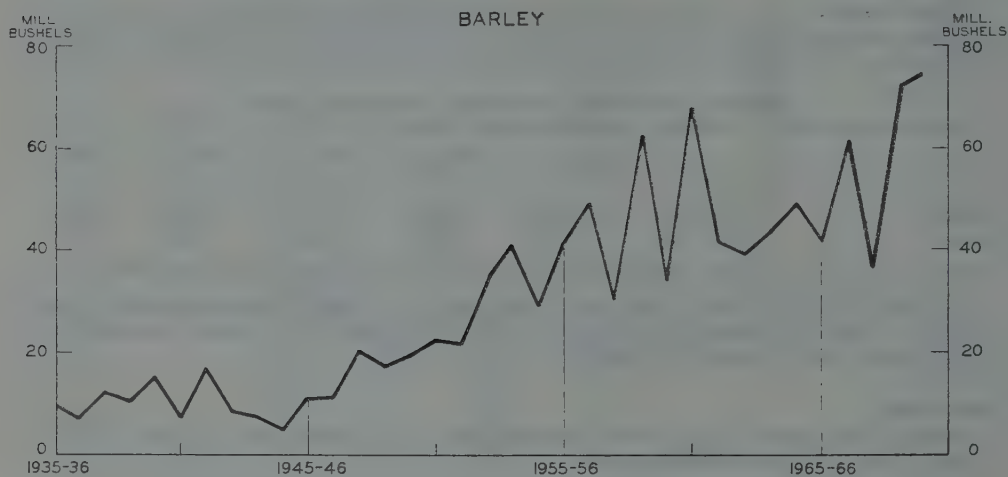
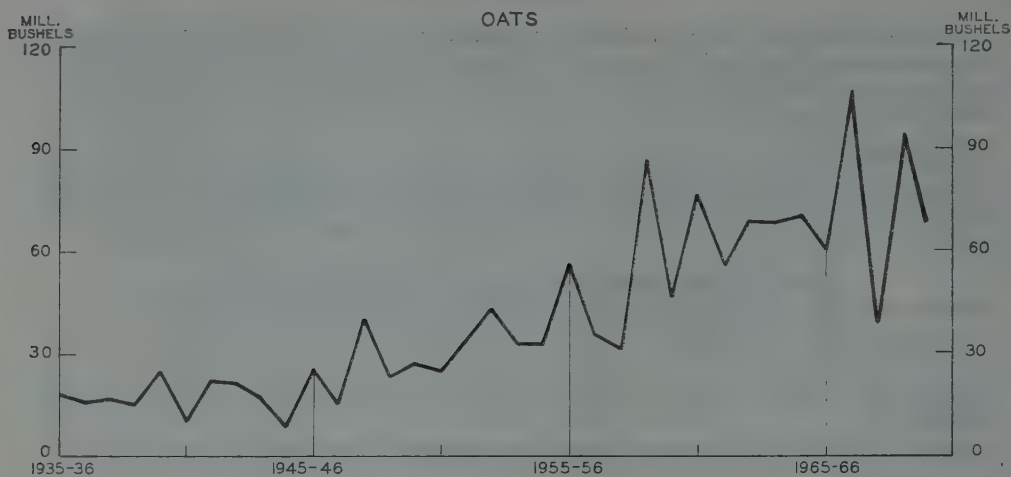


PLATE 39



According to estimates made by the United States Department of Agriculture, world production of barley in the year 1969 amounted to 5,137 million bushels harvested from 173 million acres, equivalent to a yield per acre of 29.7 bushels. This compared with the production of 5,094 million bushels in the previous year from 165 million acres, giving a yield per acre of 30.9 bushels.

## Sorghum

Grain sorghum is a summer-growing annual palatable to stock and more drought and frost-resistant than maize. It requires a summer rainfall. The growing of this crop for grain on an extensive scale is a comparatively recent development in Australia, and, as with other cereals, operations are highly mechanised.

The climatic conditions of Queensland and northern New South Wales are particularly suited to the growing of sorghum, and development has so far been restricted mainly to these areas, more particularly to Queensland. The grain produced is fed to livestock and has become an important source for supplementing other coarse grains for this purpose. Other sorghums are grown in Australia mainly as green feed, hay and silage (sweet sorghums and Sudan grass) and for the production of brush for broom manufacture (broom millet). In Queensland the growing of grain sorghum is concentrated in the Burnett, Dawson-Callide areas and in the central highlands. In New South Wales the north-western slopes and Murrumbidgee Irrigation Areas are the main areas. This crop is also suitable for the semi-tropical areas of the Northern Territory, where development is proceeding, and the Kimberley Plateau, Western Australia.

GRAIN SORGHUM: AREA, PRODUCTION AND YIELD PER ACRE, STATES  
1965-66 TO 1969-70

Year	Area			Production(a)			Yield per acre(a)		
	N.S.W.	Qld	Aust.(b)	N.S.W.	Qld	Aust.(b)	N.S.W.	Qld	Aust.(b)
	acres	acres	acres	'000 bushels	'000 bushels	'000 bushels	bushels	bushels	bushels
1965-66	99,576	332,768	433,437	605	6,533	7,149	6.1	19.6	16.5
1966-67	98,161	403,500	502,349	1,527	10,172	11,713	15.6	25.2	23.3
1967-68	78,165	382,192	461,834	1,580	8,939	10,582	20.2	23.4	22.9
1968-69	136,945	436,479	583,409	3,927	11,800	15,831	28.7	27.0	27.1
1969-70	245,180	371,234	620,145	6,011	6,789	12,892	24.5	18.3	20.8

(a) 60 lb per bushel. Production in New South Wales (for years prior to 1968-69) and Queensland harvested from crop sown in previous year. (b) Includes small areas sown and quantities produced in other States and Territories. Excludes Northern Territory for 1967-68, 1968-69 and 1969-70.

## Maize

Like sorghum, maize is a summer cereal demanding specific soil and climatic conditions. For grain, it is grown almost entirely in the south-east and Atherton Tablelands of Queensland and the north coast and northern tablelands of New South Wales. On the Atherton Tablelands in Queensland, and generally in New South Wales and Victoria, it provides a stock feed for dairy cattle, fat stock and pigs. In times of drought it is used also as a sheep feed. In all States except South Australia, however, this crop is grown to some extent for green feed and silage, particularly in connection with the dairying industry. There is practically no difference between grain and fodder varieties.

There has been a continuing increase in recent years in the growing of maize from hybrid strains of seed. Varieties have been developed which are capable of producing yields per acre considerably in excess of the older open pollinated types. The expansion in areas sown to hybrid maize has led to a parallel development in the specialised industry of growing hybrid strains for seed.

## Maize area, production and yield per acre

MAIZE FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE  
STATES AND A.C.T., 1965-66 TO 1969-70

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
AREA (ACRES)								
1965-66 . . .	42,000	1,683	153,081	..	1	..	..	196,765
1966-67 . . .	49,019	1,407	151,010	..	5	..	..	201,441
1967-68 . . .	51,569	917	147,732	..	155	..	..	200,373
1968-69 . . .	54,484	1,161	120,200	..	39	..	..	175,884
1969-70 . . .	80,780	1,145	108,679	..	654	..	..	191,258
PRODUCTION ('000 BUSHEL)(a)								
1965-66 . . .	1,607	101	3,209	..	..	..	..	4,918
1966-67 . . .	2,471	72	4,948	..	..	..	..	7,491
1967-68 . . .	2,320	32	4,778	..	2	..	..	7,132
1968-69 . . .	3,083	72	3,670	..	1	..	..	6,826
1969-70 . . .	4,006	73	2,713	..	6	..	..	6,797
YIELD PER ACRE (BUSHEL)(a)								
1965-66 . . .	38.3	60.3	21.0	..	60.0	..	..	25.0
1966-67 . . .	50.4	51.3	32.8	..	12.8	..	..	37.7
1967-68 . . .	45.0	34.9	32.3	..	11.4	..	..	35.6
1968-69 . . .	56.6	62.2	30.5	..	17.0	..	..	38.8
1969-70 . . .	49.6	62.8	25.0	..	9.9	..	..	35.5

(a) 56 lb per bushel. Production in New South Wales (for years prior to 1968-69) and Queensland harvested from crop sown in previous year.

The average yield for Australia for the five-year period ended 1969-70 was 34.4 bushels per acre. Among principal producing countries, the United States of America averaged 83.9 bushels per acre and Brazil 21.6 bushels for 1969.

## Value of maize crop

The average wholesale price of maize in the Melbourne market in 1969-70 was \$2.17 per bushel compared with \$2.83 in 1968-69. The estimated gross value of the crop in each State for the 1969-70 season and the value per acre were as follows.

## MAIZE FOR GRAIN: VALUE OF CROP, STATES, 1969-70

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Aggregate value . \$'000	5,968	111	3,752	..	8	..	9,839
Value per acre . \$	73.88	96.95	34.52	..	12.23	..	51.44

## Exports of maize

## MAIZE: EXPORTS, AUSTRALIA, 1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
Quantity . . . '000 bus	1	80	101	7	27
Value . . . \$'000 f.o.b.	4	114	169	15	51

### World production of maize

According to figures issued by the United States Department of Agriculture, world production of maize in the year 1969 amounted to 9,722 million bushels, harvested from 257 million acres, giving an average yield per acre of 37.8 bushels. This compared with production in the previous year of 9,046 million bushels from 252 million acres, and an average yield of 35.9 bushels per acre.

The United States of America is the most important maize-producing country in the world, and during the four years ended 1968 the area sown to maize in that country averaged 57 million acres or 23 per cent of the world total. During the same period production averaged 4,168 million bushels or 48 per cent of the world total.

### Rice

The principal rice-growing areas of the world are confined almost entirely to Asia, although limited quantities are grown in other countries. In Australia rice was first cultivated at the Yanco Experimental Farm in New South Wales, but it was not grown commercially until 1924-25, when 16,240 bushels were produced from 153 acres. Favoured by high average yields and protected by tariff, rice culture made rapid progress in the Murrumbidgee Irrigation Areas until local requirements were met and a surplus became available for export. The acreage sown in this area is controlled, as the quantity of water available is limited.

Apart from small experimental areas in Western Australia and the Northern Territory, rice-growing in Australia is practically confined to the Murrumbidgee Irrigation Areas in New South Wales and the Townsville area of Queensland. The bulk of Australia's exports of rice in 1969-70 was shipped to Papua and New Guinea, and Okinawa. Details relating to area, production, and Australian-produced exports for the years 1965-66 to 1969-70 are shown in the following table.

**RICE: AREA, PRODUCTION AND EXPORTS, AUSTRALIA(a)**  
1965-66 TO 1969-70

Year	No. of holdings growing rice(b)	Production (Paddy rice)			Average yield (paddy) per acre	Imports	Exports
		Area	Quantity				
			Gross value(c)				
		acres	'000 bushels (d)	\$'000	bushels (d)	'000 lb	'000 lb
1965-66	1,115	64,398	9,540	10,224	148.1	3,951	142,256
1966-67	1,164	73,724	11,250	12,445	152.6	3,718	198,370
1967-68	1,210	75,957	11,597	12,831	152.7	3,749	224,956
1968-69	1,464	83,267	13,420	14,358	161.2	3,225	245,202
1969-70	1,804	99,244	12,951	14,533	130.5	3,397	283,880

(a) For some years particulars of area and production for Western Australia and the Northern Territory are not available for publication, and are excluded. (b) Twenty acres or more in area. (c) Excludes the value of straw. (d) 42 lb per bushel.

### Fodder crops

#### Hay

Because of the comparatively unreliable nature of rainfall in Australian agricultural and pastoral areas, hay as a fodder crop occupies a position of importance. In 1969-70 hay represented 7 per cent of the total area of crops. Up to 1946-47 hay, in terms of area, was second only to wheat for grain, but in more recent years it has been supplanted by green feed (for feeding-off). Hay is generally considered to include cereal hay, meadow hay and lucerne hay. Cereal crops cut early for hay contain a higher level of protein than those cut late.

In most European countries hay is made almost entirely from meadow pastures, but in Australia a very large proportion is made from cereals and lucerne, the hay being stored loose, in sheaves or baled. Because of its bulk, hay is usually produced for individual or local use, except in times of drought, when large inter-regional transfers may take place. Meadow hay requires greater care in preparation than cereal hay. Baling must be spaced carefully behind mowing to ensure that the bales are dry enough to prevent moulding, but not so dry as to result in excessive leaf loss. The leaves contain the bulk of the protein. Lucerne hay requires similar attention.

**HAY: AREA, PRODUCTION AND YIELD PER ACRE, STATES AND TERRITORIES  
1965-66 TO 1969-70**

<i>Season</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>AREA ('000 ACRES)</b>									
1965-66 . . .	733	1,150	155	299	291	148	1	4	2,780
1966-67 . . .	823	1,558	129	482	295	203	1	4	3,496
1967-68 . . .	586	1,165	119	429	318	179	2	2	2,800
1968-69 . . .	823	1,847	112	615	341	211	2	4	3,955
1969-70 . . .	748	1,200	181	384	500	172	4	3	3,192
<b>PRODUCTION ('000 TONS)</b>									
1965-66 . . .	978	1,873	282	368	414	257	2	5	4,179
1966-67 . . .	1,481	2,982	314	729	417	437	2	9	6,371
1967-68 . . .	806	1,556	296	418	421	309	3	3	3,812
1968-69 . . .	1,439	3,635	263	985	501	494	5	7	7,330
1969-70 . . .	1,406	2,466	373	608	508	365	5	7	5,737
<b>YIELD PER ACRE (TONS)</b>									
1965-66 . . .	1.33	1.63	1.83	1.23	1.43	1.74	1.39	1.29	1.50
1966-67 . . .	1.80	1.91	2.44	1.51	1.41	2.15	1.63	2.14	1.82
1967-68 . . .	1.38	1.34	2.49	0.97	1.32	1.73	1.30	1.19	1.36
1968-69 . . .	1.75	1.97	2.35	1.60	1.47	2.35	2.38	1.60	1.85
1969-70 . . .	1.88	2.05	2.06	1.58	1.00	2.12	1.26	2.01	1.80

Plate 37 shows the area under hay since 1900-01 (page 748).

Information regarding areas cut for hay and varieties grown in 1969-70 is given in the following table.

**HAY: AREA OF VARIOUS KINDS GROWN, STATES AND TERRITORIES  
1969-70  
(Acres)**

<i>State or Territory</i>	<i>Oaten</i>	<i>Lucerne</i>	<i>Wheaten</i>	<i>Other</i>	<i>Total</i>
New South Wales . . .	79,704	290,268	95,585	282,699	748,256
Victoria . . .	199,638	95,135	41,528	864,175	1,200,476
Queensland . . .	14,682	87,185	32,401	46,507	180,775
South Australia . . .	101,391	66,616	55,287	160,538	383,832
Western Australia . . .	219,117	2,095	118,226	160,778	500,216
Tasmania . . .	9,425	4,593	241	157,544	171,803
Northern Territory . . .	..	109	..	3,583	3,692
Australian Capital Territory . . .	237	1,937	64	1,005	3,243
<b>Australia . . .</b>	<b>624,194</b>	<b>547,938</b>	<b>343,332</b>	<b>1,676,829</b>	<b>3,192,293</b>

For all States and the Territories combined, the proportions of the areas sown to the principal kinds of hay in 1969-70 were 19.6 per cent for oaten, 17.2 per cent for lucerne, 10.7 per cent for wheaten, and 52.5 per cent for other hay.

The following table shows the estimated gross value, and the value per acre, of the hay crop of the several States for the 1969-70 season.



## HAY: VALUE OF CROP, STATES 1969-70

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(a)
Aggregate value	• \$'000	36,103	38,927	14,320	7,368	12,657	4,217	113,942
Value per acre	• \$	48.25	32.43	79.21	19.20	25.30	24.55	35.69

(a) Includes \$140,000 and \$210,000 for the Northern Territory and Australian Capital Territory respectively.

## Farm stocks of hay

Particulars of stocks of hay held on farms at 31 March for the years 1966 to 1970 are given in the table below.

STOCKS OF HAY HELD ON FARMS, STATES AND A.C.T., 1966 TO 1970  
(Tons)

31 March—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.(a)
1966	1,158,481	1,915,693	190,659	444,089	291,528	296,196	5,171	4,301,817
1967	1,888,668	2,175,731	270,470	544,676	249,531	399,891	8,151	5,537,118
1968	1,273,385	1,104,034	241,922	267,677	223,115	297,118	3,594	3,410,845
1969	1,819,874	2,987,848	152,945	723,057	243,836	450,547	4,975	6,383,082
1970	2,536,522	2,376,974	254,397	630,388	237,339	443,332	13,540	6,492,492

(a) Excludes the Northern Territory, for which particulars are not available.

Under normal conditions, hay, whether whole or in the form of chaff, is somewhat bulky for overseas trade, and consequently does not figure largely among Australian exports. During 1969-70 exports amounting to 9,976 tons, valued at \$397,000, were made, principally to Iran, Japan and Singapore. Imports of hay are not recorded separately, but are considered to be negligible.

## Green feed

Considerable areas are devoted to the growing of green feed, usually as an adjunct to cereal operations or as a minor crop in irrigation areas. The areas recorded in respect of green feed include areas of crops cut for feeding to livestock as green feed or ensilage, together with areas fed off to stock as green forage. Statistics of green feed exclude areas which may have been sown with the intention of harvesting for grain, but which, owing to adverse conditions, showed no promise of producing grain or even hay and were fed off to livestock. The principal crops cut for green feed are lucerne and oats, while small quantities of barley, sorghum, wheat, maize, rye, and sugar cane are also used in this way. In 1969-70 the area under green feed (6,654,030 acres) consisted of oats (2,400,988 acres), lucerne (2,914,123 acres), barley (296,905 acres), sorghum (390,861 acres), wheat (273,144 acres), rye (28,907 acres), maize (23,873 acres), sugar cane (1,325 acres), and other crops (323,877 acres). Particulars concerning the area of green feed in the several States during each of the years 1965-66 to 1969-70 are given in the following table.

GREEN FEED: AREA, STATES AND TERRITORIES, 1965-66 TO 1969-70  
('000 acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1965-66	1,952	526	1,143	1,210	414	78	1	1	5,324
1966-67	2,133	443	1,179	1,169	399	74	..	1	5,399
1967-68	2,326	545	1,337	1,217	414	75	..	1	5,916
1968-69	2,428	352	1,406	1,130	297	99	1	1	5,714
1969-70	2,889	364	1,631	1,295	383	89	1	1	6,654

In the 1969-70 season green feed ranked second to wheat in area of crops throughout Australia. A graph showing the area sown to green feed appears on plate 37, page 748. The value of these crops is variously estimated in the several States, but the Australian total, excluding Western Australia, may be taken as approximately \$35,000,000 for the 1969-70 season.

### Ensilage

Ensilage is produced from herbage compacted tightly to exclude air and kept from contact with air and extraneous moisture to avoid moulding. Fermentation results in a dark mass with a high protein and lactic acid content. Molasses may be added to hasten fermentation. Ensilage may be stored in pits or stacks or in constructed silos.

The several State Governments devote a considerable amount of attention to the education of the farming community with regard to the value of ensilage. Monetary aid is afforded in the erection of silos, and expert advice is supplied in connection with the design of the silos and the cutting and packing of the ensilage. Information regarding production and farm stocks of ensilage for the years 1965-66 to 1969-70 is given in the following table.

ENSILAGE: PRODUCTION AND FARM STOCKS, STATES AND A.C.T.  
1965-66 TO 1969-70  
(Tons)

<i>Period</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Production during—								
1965-66 season .	139,438	228,439	42,886	48,388	30,225	52,802	120	542,298
1966-67 „ .	312,968	335,244	31,895	65,548	29,135	87,041	406	862,237
1967-68 „ .	134,408	160,771	36,238	22,388	30,322	66,602	40	450,769
1968-69 „ .	208,650	337,360	18,221	91,925	45,469	71,209	98	772,932
1969-70 „ .	426,738	289,413	57,396	41,179	38,549	52,449	1,650	907,374
Farm stocks at—								
31 March 1966 .	365,995	157,134	73,122	58,038	28,293	43,461	291	726,334
„ „ 1967 .	519,371	233,979	77,180	62,262	20,476	68,464	740	982,472
„ „ 1968 .	365,488	82,139	79,461	24,749	21,460	54,118	4	627,419
„ „ 1969 .	393,838	263,190	68,222	80,892	30,078	66,596	27	902,843
„ „ 1970 .	690,892	251,880	73,496	69,075	19,656	66,969	1,679	1,173,647

### Sugar cane

The growing of sugar cane is restricted to those coastal areas in Queensland and northern New South Wales which have suitable climatic and soil conditions.

The Bureau of Sugar Experiment Stations in Queensland and the Colonial Sugar Refining Company Limited render useful service to the sugar industry by advocating and demonstrating better methods of cultivation and the more scientific use of fertilisers, lime, etc. and by producing and distributing improved varieties of cane. In common with these two organisations, Sugar Research Ltd, of Mackay, undertakes technological research in raw sugar milling practices.

### Sugar agreements and marketing arrangements in Australia

In Year Book No. 37, pages 940-1, a summary is given of the agreement operating between the Commonwealth and Queensland Governments in respect of the sugar industry in Australia. Briefly, the agreement places an embargo on sugar importations and fixes the maximum wholesale price of sugar consumed in Australia. The current agreement, which replaced the 1962 agreement (extended by supplementary agreements) is for the period from 1 July 1969 to 30 June 1974 and prescribes maximum wholesale prices for sugar (delivered State capital cities) equivalent to a retail price of 10.5 cents per lb.

Production of sugar is regulated under the terms of the agreement. At the mill level control is exerted by means of seasonal 'mill peaks' in respect of Queensland mills and a proportionate allowance for New South Wales mills. The combined total equals the estimated requirements of the domestic and export markets. Farm production is regulated according to the limit on the mill which the farm supplies. Exports are limited by the export quota provisions of the International Sugar Agreement (*see next page*).

The Queensland Government acquires the whole of the sugar production of that State and of New South Wales by legislation and private agreement respectively. The net proceeds of all sugar sold are pooled and uniform prices paid to mills. Production for 1970-71 is estimated to be 2,478,000 tons 94 net titre, to which New South Wales is expected to contribute approximately 141,000 tons.

### International Sugar Agreement

The International Sugar Agreement of 1937 was superseded by the International Sugar Agreements of 1953, 1958 and 1968. Details of the 1937, 1953 and 1958 Agreements were given in Year Books No. 40, pages 881-2, No. 48, page 936 and No. 54, page 892 respectively.

The 1968 International Sugar Agreement came into force on 1 January 1969. The Agreement is for a five year period, but the operation of the Agreement is to be reviewed before the end of the third year. It is possible that such a review will result in modifications to the Agreement to apply in its final two years.

Like its predecessors, the 1968 Agreement is built around a schedule of export quotas governing the net exports of exporting members to the world 'free' market. The Agreement is designed to maintain a balance between total world free market supply and demand by adjustments to the level of quotas in effect of exporting members. Quotas in effect cannot be adjusted downwards below 90 per cent of basic export tonnages except in exceptional circumstances where adjustments down to 85 per cent may be possible.

Quota adjustments under the Agreement must take account of the prices (meaning 'prevailing prices' as defined by the Agreement), ruling in the world free market. The quota adjustment provisions pivot around a world free market price of U.S. four cents per pound f.o.b. and stowed Caribbean port, in bulk. When the price is below U.S. four cents, the system is designed to provide an upward pressure on prices by quota reductions. When the price is above U.S. four cents, the system is designed to apply a downward pressure on prices by increases in the level of quotas in effect above basic export tonnages.

Under the Agreement, exporters are required to establish and maintain certain levels of minimum stocks which are only to be released to the market when the price rises above U.S. 4.75 cents. If the price rises above U.S. 5.25 cents all quota restraints become inoperative and, if the price rises above U.S. 6.50 cents, exporters are required to supply importer members with certain quantities of sugar at prices not exceeding the commercial equivalent of U.S. 6.50 cents.

If the price is below U.S. 3.50 cents, minimum export quotas in effect are to apply, while at prices below U.S. 3.25 cents, members are obliged to prohibit imports from non-member countries.

Australia has a basic export tonnage under this Agreement of 1,100,000 metric tons raw value (about 1,040,000 long tons of actual raw sugar) and is obliged to establish a minimum level of uncommitted stocks amounting to 15 per cent of this quantity.

Australian exports of negotiated price sugar to the United Kingdom under the British Commonwealth Sugar Agreement, and to the U.S.A. market, are not controlled by the International Sugar Agreement.

### British Commonwealth Sugar Agreement

On 1 January 1953 the British Commonwealth Sugar Agreement became effective. The Agreement is now of indefinite duration but is subject to triennial review, with the next such review being held in 1971. Under the Agreement Australia has a Negotiated Price Quota of 335,000 tons per annum to the United Kingdom. The negotiated price for the years 1966, 1967 and 1968 of £stg43.10s. per ton of bulk raw sugar, f.o.b. and stowed, was extended for the three years to 1971.

The Agreement also allows Australia an adjusted Overall Agreement Quota (including the negotiated price quota) of 630,000 tons per annum, which can be adjusted from time to time as a result of re-allocations of other Commonwealth Sugar Agreement exporters. The balance of this quota over the negotiated price quota may be sold to preferential markets on the basis of the world market price plus preference, as part of Australia's export quota under the International Sugar Agreement.

### Exports to the United States of America

Australian exports to the U.S.A. are governed by legislation enacted by the U.S.A. in 1965 and covering the period to the end of 1971. These exports are sold on the U.S. domestic raw sugar market, the supplies to which are regulated with a view to ensuring stable and equitable prices, independently of prices ruling elsewhere in the world.

Australian export entitlements to this market vary from year to year but have recently been of the order of 170,000 tons of raw sugar per year.

### Fruit Industry Sugar Concession Committee and sugar rebates

The Fruit Industry Sugar Concession Committee was established by agreement between the Commonwealth and Queensland Governments and administers a fund provided from contributions by the Queensland Government on behalf of the sugar industry.



Until 15 May 1960 a rebate of \$4.40 a ton of refined cane sugar used in processing approved fruit products was paid to Australian manufacturers, provided they brought fresh fruit for processing at prices not lower than those declared by the Committee as reasonable. This was increased to \$10 a ton from 16 May 1960 and to \$15 from 1 July 1969.

An export sugar rebate is also paid by the Committee to exporters of approved fruit products to ensure that manufacturers do not pay higher prices for the Australian sugar content than the price for which the cheapest imported sugar could be landed duty free in Australia. The Queensland Government is responsible for payment of a similar rebate to exporters of other approved products. Payment of the export sugar rebate in respect of approved fruit products has been made conditional upon satisfactory arrangements having been made for payment for the fresh fruit used for processing at not less than the prices (if any) which the Committee has declared to be reasonable.

Under the Sugar Agreement 1969 the Queensland Government contributes \$924,000 to the fund annually, reimburses the Committee for the actual expenditure on export sugar rebates, and, pays the Committee an additional sum equal to the amount payable by way of domestic sugar rebate in respect of the approved fruit products exported. Any money remaining in the fund after the payment of rebates and administrative expenses may be used by the Committee for the promotion of the use and sale of fruit products, or for research for the purpose of increasing the yield per acre of Australian fruit, or of obtaining information regarding Australian fresh marketable fruits.

### Financial assistance to the sugar industry

Under the provisions of the *Sugar Marketing Assistance Agreement Act 1967* the Commonwealth Government arranged a loan of \$19 million, plus interest on a temporary advance of this amount from the Reserve Bank, to assist the returns from No. 1 Pool in the 1966 season, and \$3,559,193 for a similar purpose in respect of the 1967 season. The total amount of \$23,327,590 so advanced is repayable over ten years commencing in mid-1970, and was not subject to interest before then. Thereafter it incurs interest at the rate of five per cent per annum.

### Bulk handling of sugar

Bulk handling and mechanised loading and unloading of raw sugar is now in operation throughout the Australian sugar industry. Terminals for the bulk loading of sugar were opened at Mackay in 1957, at Lucinda and Bundaberg in 1958, at Townsville in 1959, at Mourilyan in 1960, and at Cairns in 1964. A second storage shed at Bundaberg, a third shed at Mackay and second sheds at Lucinda and Townsville have been opened subsequently to give a total bulk storage capacity of 1,300,000 long tons. The comparatively small New South Wales sugar industry was converted to bulk handling in 1954. Bulk receiving facilities are in operation at all Australian refineries.

### Area of sugar cane

A brief outline of the development of the industry was included in earlier issues of the Year Book (see No. 38, page 985). The area of sugar cane in Australia for the seasons 1965-66 to 1969-70 are shown in the following table. The areas shown in the table do not include the small acreage cut for green feed, which in 1969-70 amounted to 1,352 acres. The whole area planted is not cut for crushing during any one season, there being always a considerable amount of young and 'stand-over' cane as well as a small quantity required for plants.

SUGAR CANE: AREA(a), STATES, 1965-66 TO 1969-70  
(Acres)

Year	New South Wales			Queensland			Australia			Total
	Area crushed	Area of standover and newly- planted cane	Area cut for plants	Area crushed	Area of standover and newly- planted cane	Area cut for plants	Area crushed	Area of standover and newly- planted cane	Area cut for plants	
1965-66(b) . .	15,824	23,350	668	487,375	105,361	14,243	503,199	128,711	14,911	646,821
1966-67 . . .	22,475	18,548	613	534,998	78,609	13,265	557,473	97,157	13,878	668,508
1967-68 . . .	22,181	18,761	488	530,828	89,494	13,194	553,009	108,255	13,682	674,946
1968-69 . . .	22,174	18,588	599	546,306	84,237	13,314	568,480	102,825	13,913	685,218
1969-70 . . .	19,838	19,490	487	505,978	120,735	13,808	525,816	140,225	14,295	680,336

(a) Excludes areas cut for green fodder.

(b) Excludes a small area sown in Western Australia.



**Production of cane and sugar**

The production of sugar cane in 1969-70 was 15,535,000 tons, which was 2,878,000 tons below the record production in 1968-69. The production of raw sugar from 1935-36 is shown in plate 39, page 768.

**SUGAR CANE: PRODUCTION OF CANE AND RAW SUGAR, STATES, 1965-66 TO 1969-70**  
(Tons)

Year	New South Wales		Queensland		Australia	
	Cane	Sugar(a)	Cane	Sugar(a)	Cane	Sugar(a)
1965-66	609,320	69,989	13,545,719	1,883,364	14,155,039	1,953,353
1966-67	1,171,441	139,967	15,513,449	2,202,809	16,684,890	2,342,776
1967-68	1,038,507	120,583	15,717,789	2,213,810	16,756,296	2,334,393
1968-69	997,813	120,381	17,414,966	2,604,319	18,412,779	2,724,700
1969-70	835,232	97,721	14,699,785	2,081,036	15,535,017	2,178,757

(a) Raw sugar at 94 net titre.

Climatic conditions in New South Wales are such that the crop matures in from twenty to twenty-four months, whereas in Queensland a period of from twelve to sixteen months is sufficient. The average yields of cane and sugar per acre for the years 1965-66 to 1969-70 are shown below. Allowance should be made in interpreting these figures for the disparity in maturing periods noted above.

**SUGAR CANE AND SUGAR: YIELD PER ACRE, STATES, 1965-66 TO 1969-70**  
(Tons)

Year	New South Wales			Queensland			Australia		
	Cane per acre crushed	Sugar per acre crushed	Cane to each ton of sugar	Cane per acre crushed	Sugar per acre crushed	Cane to each ton of sugar	Cane per acre crushed	Sugar per acre crushed	Cane to each ton of sugar
1965-66	38.51	4.42	8.71	27.79	3.86	7.19	28.13	3.88	7.25
1966-67	52.12	6.23	8.37	29.00	4.12	7.04	29.93	4.20	7.12
1967-68	46.82	5.44	8.61	29.61	4.17	7.10	30.30	4.22	7.18
1968-69	45.00	5.43	8.29	31.88	4.77	6.69	32.39	4.79	6.76
1969-70	42.10	4.93	8.55	29.05	4.11	7.06	29.54	4.14	7.13

**Production and utilisation of sugar**

Details of the production and utilisation of sugar for the years 1965-66 to 1969-70 are shown below. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

**SUGAR: PRODUCTION AND UTILISATION, AUSTRALIA, 1965-66 TO 1969-70**

Year	Changes in stocks(a)	Production (raw)(b)	Exports(c)	Miscellaneous uses(d)	Consumption in Australia(e)	
					Total	Per head
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1965-66	+ 82.6	1,961.8	1,289.0	22.1	568.2	110.7
1966-67	- 36.5	2,222.1	1,674.6	20.8	563.2	107.7
1967-68	+170.0	2,393.9	1,634.8	20.8	568.3	106.7
1968-69	n.a.	2,563.2	2,058.4	n.a.	584.7	107.6
1969-70	n.a.	2,167.1	1,387.9	n.a.	603.2	108.6

(a) Includes allowance for estimated sugar content of imported foodstuffs. (b) Year ended June; *tel quel* basis. Not comparable with production figures shown in production table as those relate to year ended March on a 94 net titre basis. (c) Raw and refined, including ships' stores and sugar in exported foodstuffs. (d) Includes refining losses and quantities used in golden syrup and treacle. (e) Includes sugar content of manufactured products consumed.

The statistics of sugar usage in factories for 1968-69 and 1969-70 are not yet available. However, the quantity recorded as used in factories in 1967-68 amounted to 377,132 tons compared with 372,394 tons in 1966-67 and 371,713 tons in 1965-66. Particulars of sugar used in establishments

not classified as factories are not available, and consequently these quantities are deficient to that extent. In 1967-68 the reported consumption by factories engaged in the production of jams, jellies and preserved and dried fruit and vegetables amounted to 77,288 tons, by those producing confectionery, ice cream, etc., to 74,196 tons, by breweries to 47,438 tons, and by factories producing aerated waters, cordials, etc., to 70,775 tons.

### Sugar prices and returns

The current prices of sugar in Australia (as determined under the Sugar Agreement in Australia, see page 774) and details of net returns for raw sugar from 1965-66 to 1968-69 are shown in the following tables.

#### SUGAR: PRICES IN AUSTRALIA

Year	Raw sugar, 94 net titre			Refined sugar	
	Average return per ton received by millers and growers for—			Date of determination	Wholesale price to retailer per ton
	Home consumption	Exports(a)	Whole crop(a)		Retail price capital cities per lb
	\$	\$	\$		\$
1965 . .	121.95	67.27	85.14	19.6.67	206.72
1966 . .	121.25	57.47	75.01		
1967(b) . .	142.80	59.45	82.05		
1968(b) . .	143.20	63.04	82.10		
1969(b) . .	143.10	80.83	99.76		

(a) Includes 'excess' sugar.

(b) Excludes repayable Commonwealth arranged loan (see page 776).

#### RAW SUGAR(a): NET RETURNS, AUSTRALIA, 1965-66 TO 1969-70

(Source: The Queensland Sugar Board)

Year	Proportion exported	Net value of exports per ton	Average price per ton for whole crop	Estimated value of crop
	per cent	\$	\$	\$'000
1965-66 . . .	67.31	67.27	85.14	166,270
1966-67 . . .	72.50	57.47	75.01	175,694
1967-68 . . .	72.89	59.45	82.05	191,471
1968-69 . . .	76.23	63.04	82.10	223,638
1969-70 . . .	69.61	80.83	99.76	217,279

(a) 94 net titre.

The estimated value of the raw sugar produced has been based upon details taken from the audited accounts of the Queensland Sugar Board. The values stated comprise the gross receipts from sales in Australia and overseas, less refining costs, freight, administrative charges, etc., and export charges. They include concessions to the fruit industry and other rebates which in 1969-70 amounted to \$3,365,000, but exclude the repayable Commonwealth grants referred to earlier. The value thus obtained represents the net market value of all raw sugar sold, which, less the rebates, is divided between the growers and millers in the approximate proportions of 70 per cent and 30 per cent respectively.

### Exports of sugar

#### RAW AND REFINED SUGAR: EXPORTS, AUSTRALIA, 1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
Quantity . . . tons	1,252,546	1,652,263	1,597,235	2,029,177	1,364,246
Value . . . \$'000 f.o.b.	93,925	100,026	97,582	122,214	116,108

## Tobacco

Tobacco is a summer-growing annual which requires a temperate to tropical climate, adequate soil moisture and a frost-free period of approximately five months. In Australia almost all tobacco is grown under irrigation. Because of specialised requirements, production is limited to areas with suitable soils and climate. The main centres of production are the Mareeba-Dimbulah districts of north Queensland and Myrtleford in north-eastern Victoria. Other areas where tobacco is grown include Bundaberg, Beerwah and Texas (Queensland), Ashford (New South Wales) and Wangaratta (Victoria). All tobacco grown in Australia is of the flue-cured type except for small quantities of burley tobacco produced mainly in Victoria.

### Marketing

Between 9 May 1941 and 24 September 1948 all leaf was under the direct control of the Australian Tobacco Board, and prices were paid on leaf appraisal. Subsequently the Board was disbanded, and sales have been by open auction through the Tobacco Leaf Marketing Board (Queensland and northern New South Wales) and the Victorian Tobacco Growers Association Ltd (southern New South Wales and Victoria). In 1964 the Victorian Tobacco Leaf Marketing Board was set up to market the portion of the crop that was formerly sold by the Victorian Tobacco Growers Association Ltd, and in 1965 a Board was established in New South Wales. However, the actual physical handling of New South Wales leaf at auction is carried out by the Queensland and Victorian authorities.

In 1965 the Commonwealth and State Governments agreed to a stabilisation plan for the tobacco growing industry with an annual marketing quota of 26 million pounds (green weight) of leaf to be sold under an agreed grade and price schedule providing for an average minimum price, based on normal crop fall-out. The overall marketing quota is divided among tobacco-producing States according to a formula approved by the Australian Agricultural Council. The determination of grower disputes in regard to quotas from State allocations is the responsibility of State Quota Committees.

In 1968, the final year of the plan, the Governments concerned agreed that it should continue for a further period of five years with an increased marketing quota for the 1969 selling season of 28.5 million pounds, which was subsequently increased to 31.5 million pounds to correct industry stockholdings which were depleted by higher than expected manufacturer usage. Provision was made for an annual review of the quota and in 1970 a basic quota of 34 million pounds was set for the 1971 season, to be divided among the producing States in the same proportions as the original quota.

The plan is administered by the Australian Tobacco Board, constituted under the *Tobacco Marketing Act* 1965-66 and representative of the Commonwealth, tobacco-producing States, growers, and manufacturers.

The guaranteed average minimum Australian price for the 1971 season, 114.5 cents per lb, is 5.5 cents per lb above the price set for the 1970 season.

### Central Tobacco Advisory Committee

The Australian Agricultural Council formed the Standing Advisory Committee on Tobacco during 1950. This Committee consisted of representatives of tobacco growers, tobacco manufacturers and the Commonwealth and State Governments. Its main functions were to review the industry and make recommendations on factors affecting its development and progress. The Committee was reconstituted as the Central Tobacco Advisory Committee in 1952-53.

In order to receive funds for increased research and extension activities, the Tobacco Industry Trust Account was established by the *Tobacco Industry Act* 1955-65 and came into operation on 2 December 1955. Growers and manufacturers contribute to the Trust Account by way of levies imposed on Australian leaf sold and purchased. These industry contributions are matched by the Commonwealth Government with payments made as funds are expended. The Governments of the three tobacco producing States make fixed annual contributions. Money standing to the credit of the Account may be applied for the purpose of research and investigation in connection with the tobacco industry, the training of personnel and the publication and dissemination of scientific and technical information for the industry.

The Central Tobacco Advisory Committee is required to make recommendations to the Minister for Primary Industry in regard to expenditure from the Tobacco Industry Trust Account. By 30 June 1970 expenditure from the Account amounted to \$7.5 million, and allocations in 1970-71 totalled \$864,915.



### Tobacco research and extension

The Commonwealth Scientific and Industrial Research Organization and the State Departments of Agriculture in the tobacco growing States are carrying out investigations into a wide range of problems involving fundamental and applied research in plant breeding and variety evaluation, nutrition, disease and pest control, and cultural practices. The State Departments also provide extension services for tobacco growers. A Mechanisation Sub-Committee of the Central Tobacco Advisory Council was established in 1970 to investigate and advise on practical aspects of mechanisation of the tobacco-growing industry.

Details of the recommendations by the Tobacco Inquiry Committee and grants periodically approved by the Commonwealth Government up to 30 June 1953 are given in Year Book No. 40, pages 895-6, and in previous issues.

### Tobacco factories

Manufacturers of Australian cigarettes and tobacco are granted a lower rate of duty on imported tobacco leaf, provided it is blended with a prescribed minimum percentage of Australian leaf. These percentages, which in November 1946 stood at 3 per cent for cigarettes and 5 per cent for tobacco, have been increased progressively in intervening years and since 1 January 1966 have been set at 50 per cent for both cigarettes and tobacco.

In 1967-68 the quantity of cured leaf recorded as used in tobacco factories in Australia amounted to 50 million lb, of which 23 million lb was of local origin. The balance was imported, chiefly from the United States of America and South Africa. Figures for 1968-69 and 1969-70 are not yet available.

### Tobacco area and production

The area of tobacco in 1969-70 was 12.2 per cent below the record area established in 1962-63. Production at 35,415,000 lb was 3.1 per cent above the previous record established in 1963-64.

#### TOBACCO: AREA AND PRODUCTION, STATES, 1965-66 TO 1969-70

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
AREA (ACRES)							
1965-66	1,742	9,230	12,509	..	..	..	23,481
1966-67	1,794	8,455	12,134	..	..	..	22,383
1967-68	1,831	8,664	12,472	..	..	..	22,967
1968-69	2,190	9,727	13,837	..	..	..	25,754
1969-70	2,739	10,143	12,908	..	..	..	25,790
PRODUCTION OF DRIED LEAF ('000 lb)							
1965-66	1,698	11,083	14,580	..	..	..	27,361
1966-67	2,133	10,953	14,819	..	..	..	27,905
1967-68	2,075	7,625	15,021	..	..	..	24,721
1968-69	2,481	12,075	19,517	..	..	..	34,072
1969-70	3,061	13,378	18,975	..	..	..	35,415

### Imports and exports of tobacco

Imports of tobacco and tobacco manufactures into Australia during 1969-70 were valued at \$32.0 million. This included 32.9 million lb of unmanufactured tobacco valued at \$24.2 million. Exports of tobacco and tobacco manufactures during 1969-70 were valued at \$2,982,000, including Australian produce, \$2,334,000.



### Cotton

This annual shrub requires a hot climate and inter-row weed control. Lint (long fibres) is extracted from the seed cotton in the ginneries and is used for yarn. The residue, consisting of linters (short fibres), kernels and hulls (outer seed coat), is treated in oil mills. Linters are used in the manufacture of felts and other materials where fibre length is of little importance. The kernels when crushed produce an oil which is used for both edible and industrial purposes. The residual meal is a useful high protein stockfeed; the hulls may be used as fuel.

Until 1964 cotton growing was mainly confined to Queensland, most of it being grown under conditions of natural rainfall. Since then there has been an increasing trend in the use of irrigation. A sound industry has been established in the Namoi and Macquarie Valleys in New South Wales with water provided by the Keepit and Burrandong Dams. More than three quarters of Australia's raw cotton requirements are now produced in that area. Cotton is also grown under irrigation in Queensland and on the Ord River of Western Australia and to a lesser extent in the Murrumbidgee Irrigation Areas of New South Wales. Nearly all Australian cotton is now grown with the assistance of irrigation and acreage yields compare more than favourably with those obtained by traditional overseas cotton producing countries. Australian production currently satisfies all the requirements of local mills for short and medium staple cotton and should in the future, supply the comparatively small quantities of larger staple combing cottons currently imported.

#### Cotton bounty

For particulars of the *Cotton Bounty Act* 1951-1958, see page 1044 of Year Book No. 49. This Act was replaced by the *Raw Cotton Bounty Act* 1963-1966 under which the Commonwealth agreed to pay a bounty on raw cotton produced and sold for use in Australia at the rate of 13.4375 cents per lb for Middling 1" White, with premiums and discounts on grades and staples above and below, up to a maximum of \$4 million in any one year, for a period of five years from 1 January 1964. In 1968 this Act was amended to extend bounty payments to all cotton produced in Australia of a grade higher than Strict Good Ordinary, whether used in Australia or not, provided it has a staple length of  $\frac{7}{8}$ " or greater. The Commonwealth Government is phasing out the bounty assistance. The maximum bounty remained at the previous level of \$4 million for 1969, falling to \$3 million in 1970, and to \$2 million in 1971 after which it will cease.

#### Cotton area and production

##### COTTON: AREA, PRODUCTION AND YIELD PER ACRE, STATES AND TERRITORIES 1965-66 TO 1969-70

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES)									
1965-66	33,176	(a)	13,455	..	8,307	..	..	..	(b)54,938
1966-67	30,104	..	11,167	..	11,892	..	..	..	53,163
1967-68	53,474	..	11,629	..	11,782	..	..	..	76,885
1968-69	59,769	..	12,140	..	8,327	..	..	..	80,236
1969-70	56,662	..	13,329	..	7,210	..	..	..	77,201
PRODUCTION (UNGINNED) ('000 lb)									
1965-66	103,280	(a)	10,138	..	20,431	..	..	..	(b)133,850
1966-67	79,159	..	11,800	..	29,400	..	..	..	120,360
1967-68	170,064	..	18,718	..	25,954	..	..	..	214,736
1968-69	173,759	..	23,363	..	21,560	..	..	..	218,682
1969-70	138,783	..	28,104	..	20,800	..	..	..	187,687
YIELD PER ACRE (lb)									
1965-66	3,113	(a)	754	..	2,460	..	..	..	(b)2,436
1966-67	2,630	..	1,057	..	2,472	..	..	..	2,264
1967-68	3,180	..	1,610	..	2,203	..	..	..	2,793
1968-69	2,907	..	1,924	..	2,589	..	..	..	2,725
1969-70	2,449	..	2,108	..	2,885	..	..	..	2,431

(a) Not available for publication. (b) Incomplete; see individual States.

NOTE. Production in Queensland relates to the crop harvested in the first of the years mentioned, and in other States to the year following; e.g., for 1969-70, the Queensland crop was harvested during 1969, while the crop in other States was harvested during 1970.

Production of ginned cotton for 1965-66 was 40,885,000 lb; 1966-67, 35,510,000 lb; 1967-68, 70,405,000 lb; and 1968-69, 73,435,000 lb. Figures for 1969-70 are not yet available.

The gross value of cotton for the five years ended 1969-70 was \$14,323,000; \$12,468,000; \$19,675,000; \$20,715,000; and \$18,642,000 respectively.

Imports of raw cotton (excluding linters) during the past five years were: 1965-66, 32,096,000 lb; 1966-67, 19,963,000 lb; 1967-68, 27,066,000 lb; 1968-69, 12,497,000 lb; and 1969-70, 10,110,000 lb.

Exports of raw cotton (excluding linters) in 1969-70 were 25,442,000 lb, valued at \$5,123,000. Hong Kong and Japan were the principal importing countries.

## Peanuts

Peanuts, or groundnuts, are a sub-tropical legume (and hence summer growers), the pods of which mature beneath the surface of the soil. They thus require well drained, light textured soils. At harvest the plant is pulled, wind-rowed, field-cured for two to four weeks, and then threshed to recover the pods. The main products of the industry are nuts, peanut oil, oil cake, and synthetic protein fibre.

The production of peanuts in Australia is confined mainly to Queensland, although small quantities are grown in New South Wales, the Northern Territory and, in some years, Western Australia.

### PEANUTS: AREA AND PRODUCTION, STATES, 1965-66 TO 1969-70

Year	Area (Acres)			Production (cwt)		
	N.S.W.	Qld	Aust.	N.S.W.	Qld	Aust.
1965-66	394	57,298	57,708	4,468	543,735	548,279
1966-67	397	69,330	(a)69,727	5,194	821,957	(a)827,151
1967-68	353	61,373	61,738	3,920	602,207	606,159
1968-69	183	78,454	(a)78,637	1,861	332,740	(a)334,601
1969-70	232	86,449	(a)86,681	4,039	839,286	(a)843,325

(a) Incomplete: excludes Northern Territory.

The gross value of the 1969-70 crop was \$8,985,000 which was approximately \$5,833,000 more than in 1968-69. Total supplies available for consumption in Australia in 1969-70 were 25,409 tons (in shell equivalent), made up of an increase in stock held by the Peanut Marketing Board of 23,410 tons, receivals by the Board of 36,934 tons and imports of 11,885 tons. Exports of peanuts and peanut products for the year were 168 tons.

## Flax

The flax plant is a summer-growing annual from which varieties have been developed for the production of either fibre or linseed. Flax for the production of fibre was last recorded in 1964-65. Production of linseed during 1969-70 was 36,093 tons, the highest production since the record 1964-65 crop of 46,600 tons.

The main producing areas are the wheat belt of New South Wales, western and north-eastern districts of Victoria, the Esperance district of Western Australia and the Darling Downs in Queensland.

Particulars of area and production of flax for linseed, by States, are given in the following table for the years 1965-66 to 1969-70.

## FLAX FOR LINSEED: AREA AND PRODUCTION, STATES, 1965-66 TO 1969-70

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
Area (acres)—						
1965-66 . . . . .	3,658	7,370	12,266	1,196	97	24,587
1966-67 . . . . .	9,580	5,012	17,854	389	1,751	34,586
1967-68 . . . . .	9,947	9,365	27,764	516	6,886	54,478
1968-69 . . . . .	15,164	14,304	21,459	1,025	18,645	70,597
1969-70 . . . . .	49,455	18,880	21,513	977	30,812	121,637
Production (tons of linseed)—						
1965-66 . . . . .	213	2,538	2,895	403	15	6,064
1966-67 . . . . .	3,265	2,319	7,338	188	634	13,744
1967-68 . . . . .	952	804	6,571	72	2,083	10,482
1968-69 . . . . .	2,614	5,079	6,132	350	5,321	19,496
1969-70 . . . . .	14,499	9,312	5,701	355	6,186	36,053

## Hops

Hops are grown from perennial rootstocks over deep, well-drained soils in localities sheltered from the wind. The hop-bearing vine shoots are carried upon wire and coir trellises, from which they are later harvested. The green hops are kiln-dried and bleached with sulphur dioxide fumes, following which the cured hops are pressed into bales.

Hop growing in Australia is confined to the Derwent, Huon and Channel areas of Tasmania and the Ovens and King Valleys in Victoria. A small area is also under hops in Western Australia, near Manjimup, but the details are not available for publication.

## Production and imports of hops

The production of hops in Australia is insufficient to meet local requirements, and additional supplies are imported to meet the needs of the brewing industry. In the following table details of the production and imports of hops and the quantity of hops used in breweries are shown for each of the years 1965-66 to 1969-70. Exports of hops are negligible and are not recorded separately.

HOPS: PRODUCTION AND DISPOSAL, AUSTRALIA  
1965-66 TO 1969-70

Year	Production(a)		Imports	Net available supplies(b)	Quantity used in breweries
	Quantity	Gross value			
	cwt	\$'000	cwt	cwt	cwt
1965-66 . . . . .	36,463	3,020	12,696	49,159	35,223
1966-67 . . . . .	28,907	2,531	2,683	31,590	31,347
1967-68 . . . . .	36,752	3,211	1,370	38,122	30,501
1968-69 . . . . .	42,757	3,788	1,501	44,258	34,077
1969-70 . . . . .	40,318	3,588	357	40,675	34,549

(a) Excludes production in Western Australia, for which details are not available for publication.

(b) Disregards movements in stocks.

## Safflower

The cultivation of safflower in Australia has developed rapidly in recent years to make it one of the major oilseed crops. It is best cultivated either in the warm temperate zones or as a winter crop in the tropical or sub-tropical regions, on moderately fertile, weed-free, clay or sandy loams. Adequate moisture is required up to the flowering stage, after which it is relatively drought resistant. The soil preparation and sowing techniques are similar to those employed for small grains; it is usually harvested by combine when the seed is hard and dry. The oil, produced by crushing, is used in the manufacture of margarine, soaps, paints, varnishes, enamels, and textiles.

During 1969-70, unsuitable weather conditions in Queensland severely reduced production by 485,085 bushels to 67,470 bushels, while in New South Wales, because of crop diversification away from wheat and a consequent increase in safflower acreage, production increased by 140,916 bushels to 155,879 bushels. In Western Australia production increased from 1,153 bushels to 5,994 bushels.



## SAFFLOWER: AREA AND PRODUCTION, STATES AND TERRITORIES 1965-66 TO 1969-70

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES)									
1965-66	2,539	935	56,727	(a)	75	..	..	..	(b)60,276
1966-67	5,092	729	88,803	(a)	(a)	..	..	..	(b)94,624
1967-68	8,550	489	95,351	(a)	225	..	..	..	(b)104,615
1968-69	2,415	199	43,589	..	170	..	..	..	46,373
1969-70	16,022	130	9,475	(a)	1,203	..	..	..	(b)26,830
PRODUCTION (BUSHELS)(c)									
1965-66	13,941	11,738	522,810	(a)	1,070	..	..	..	(b)549,559
1966-67	71,823	7,336	1,290,087	(a)	(a)	..	..	..	(b)1,369,246
1967-68	59,310	1,375	815,354	(a)	2,207	..	..	..	(b)878,246
1968-69	14,963	1,268	552,555	..	1,153	..	..	..	569,939
1969-70	155,879	1,040	67,470	(a)	5,994	..	..	..	(b)230,383

(a) Not available for publication. (b) Incomplete; see individual States. (c) 40 lb per bushel.

Imports of crude safflower seed oil in 1968-69 and 1969-70 totalled 468,000 gallons and 490,500 gallons respectively. These imports came mainly from the United States of America.

## Vegetables for human consumption

## Area, production and trade

Vegetables were initially grown on a large scale near the main cities, where there was ready access to reliable water supplies and to markets. Later, the expansion of irrigation areas and improvement in transport services resulted in their production being extended into many other areas. At present, because of the wide diversity of climatic conditions across Australia, supplies for main city markets are drawn from widely different areas, depending upon the times of maturity of the various crops. Apart from potatoes and onions, which are sold in some States through marketing boards, the bulk of vegetable trading takes place at the metropolitan markets of the cities concerned.

Details of the areas planted and production of individual kinds of vegetables are shown below for the seasons 1967-68 to 1969-70. Certain particulars shown are incomplete in that details for specific vegetables in some States are either not available or are not available for publication. For further information see the bulletin *Rural Industries*. Details of the estimated consumption of vegetables for a series of years ending 1969-70 are given in the chapter Miscellaneous.

## VEGETABLES FOR HUMAN CONSUMPTION: AUSTRALIA 1967-68 TO 1969-70

Vegetable	1967-68		1968-69		1969-70	
	Area	Production	Area	Production	Area	Production
	sown		sown		sown	
	acres	tons	acres	tons	acres	tons
Asparagus	4,315	7,427	4,148	6,270	4,094	5,201
Beans, French and runner	18,632	31,395	19,745	37,607	20,018	39,243
Beans, navy	6,045	1,445	13,528	4,159	10,354	833
Beetroot	2,428	22,138	2,188	19,441	2,140	22,650
Cabbages and brussel sprouts	5,948	69,001	6,421	72,899	6,388	68,830
Carrots	6,767	74,588	6,969	78,198	7,295	80,819
Cauliflowers	6,229	72,996	6,334	68,971	6,881	92,348
Celery	839	12,639	911	15,576	1,023	16,882
Cucumbers	2,197	10,280	2,106	9,758	2,380	10,098
Lettuce	5,399	24,639	5,405	24,881	5,557	31,638
Onions	9,852	58,486	11,307	86,145	10,299	84,177
Parsnips	1,302	13,806	1,308	14,417	1,366	12,022
Peas, blue	4,267	2,505	3,357	2,129	3,952	3,205
Peas, green	57,428	91,503	60,964	117,947	62,138	135,257
Potatoes	105,668	658,112	113,437	798,478	107,062	749,763
Tomatoes	17,266	153,309	17,479	154,317	17,819	160,339
Turnips, swede and white	1,727	8,493	1,983	9,170	1,748	7,007
All other	36,809	..	41,043	..	47,382	..
<b>Total</b>	<b>293,118</b>	<b>..</b>	<b>318,633</b>	<b>..</b>	<b>317,896</b>	<b>..</b>



**Processed vegetables**

Total production of canned vegetables in 1969-70 amounted to 205,597,000 lb. The principal types produced were green peas (excluding mint-pro peas), 39,044,000 lb; green beans, 11,737,000 lb; baked beans (including pork and beans), 39,380,000 lb; asparagus, 8,987,000 lb; beetroot, 39,740,000 lb; and mushrooms, 8,547,000 lb.

The production of dehydrated vegetables, including split peas, during 1968-69 amounted to 13,168,766 lb. Figures for 1969-70 are not yet available. Production of potato crisps, chips and flakes during 1969-70 was 29,463,000 lb.

There has been rapid development in the quick-frozen vegetable industry. Data were collected for the first time in 1957-58, when 13,846,000 lb of frozen vegetables were produced, made up principally of 10,131,000 lb of peas and 2,540,000 lb of beans. In 1969-70 production had risen to 162,695,000 lb, of which 101,547,000 lb were peas and 28,848,000 lb were beans.

**Exports and imports of vegetables**

Overseas exports of fresh and frozen vegetables during 1969-70 amounted to 71,991,000 lb valued at \$3,495,000; dried vegetables, 21,441,000 lb valued at \$893,000; preserved vegetables, 6,026,000 lb valued at \$1,033,000; and other prepared or preserved vegetables, 174,000 lb valued at \$68,000.

Imports of fresh and frozen vegetables during 1969-70 amounted to 12,120,000 lb valued at \$1,672,000.

**Potatoes**

This crop requires deep friable soils, which in Australia are usually basaltic, alluvial or swampy in origin. Fertiliser requirements, which are generally high, vary with the type of soil. Potatoes are killed by heavy frost, but require only moderate temperatures for growth. Mechanical planters and diggers are used to a variable extent depending upon a variety of factors including terrain, state of the soil and scale of operations. Seed certification schemes, which operate in all States except Queensland, provide a supply of seed which is free from viral, fungal and bacterial diseases. In Australia potatoes are used almost entirely for human consumption and not for the production of starch or alcohol. They are rarely used as stock feed.

*Area, production, and yield per acre.* Victoria possesses particular advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavourable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands and the south-western and Gippsland districts. New South Wales and Queensland come next in order of acreage sown. In New South Wales production is chiefly in the tablelands district.

**POTATOES: AREA, PRODUCTION AND YIELD PER ACRE  
STATES AND TERRITORIES, 1965-66 TO 1969-70**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
<b>AREA (ACRES)</b>									
1965-66 . . .	21,913	34,333	16,080	5,748	6,229	11,993	1	14	96,311
1966-67 . . .	23,594	37,167	16,227	5,948	6,100	10,278	(a)	14	(b)99,328
1967-68 . . .	24,334	40,329	17,347	6,527	6,149	10,960	(a)	22	(b)105,668
1968-69 . . .	29,236	39,979	18,515	7,643	6,588	11,461	(a)	15	(b)113,437
1969-70 . . .	25,865	39,765	17,712	8,021	6,332	9,367	(a)	(a)	(b)107,062
<b>PRODUCTION (TONS)</b>									
1965-66 . . .	104,647	240,786	97,744	56,471	62,865	76,400	4	83	639,000
1966-67 . . .	126,183	225,186	93,738	60,271	64,169	73,300	(a)	120	(b)642,967
1967-68 . . .	122,795	215,941	106,429	63,331	70,469	79,058	(a)	89	(b)658,112
1968-69 . . .	160,823	299,961	122,990	68,018	74,435	72,120	(a)	131	(b)798,478
1969-70 . . .	142,047	279,553	115,455	78,624	67,164	66,920	(a)	(a)	(b)749,763
<b>YIELD PER ACRE (TONS)</b>									
1965-66 . . .	4.78	7.01	6.08	9.82	10.09	6.37	4.00	5.93	6.63
1966-67 . . .	5.35	6.06	5.78	10.13	10.52	7.13	(a)	8.57	(b)6.47
1967-68 . . .	5.05	5.35	6.14	9.70	11.46	7.21	(a)	4.05	(b)6.23
1968-69 . . .	5.50	7.50	6.64	8.90	11.30	6.29	(a)	8.73	(b)7.04
1969-70 . . .	5.49	7.03	6.52	9.80	10.61	7.14	(a)	(a)	(b)7.00

(a) Not available for publication.

(b) Incomplete; excludes Northern Territory and Australian Capital Territory.

The production of potatoes from 1935-36 is shown in plate 40, page 786.

# PRODUCTION OF POTATOES AND ONIONS

AUSTRALIA, 1935-36 TO 1969-70

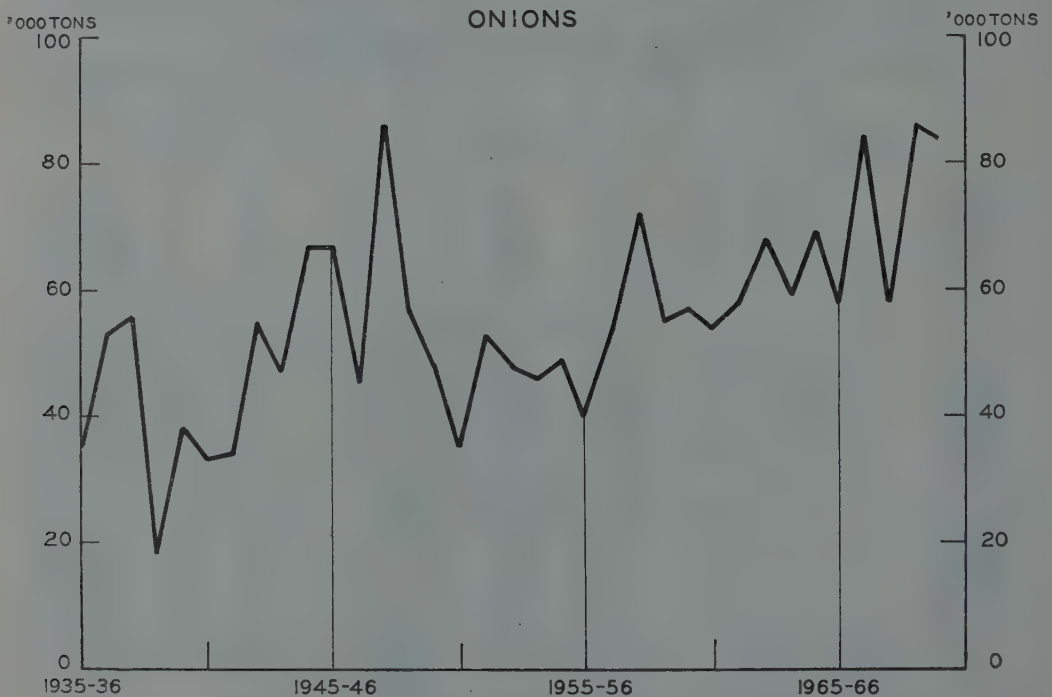
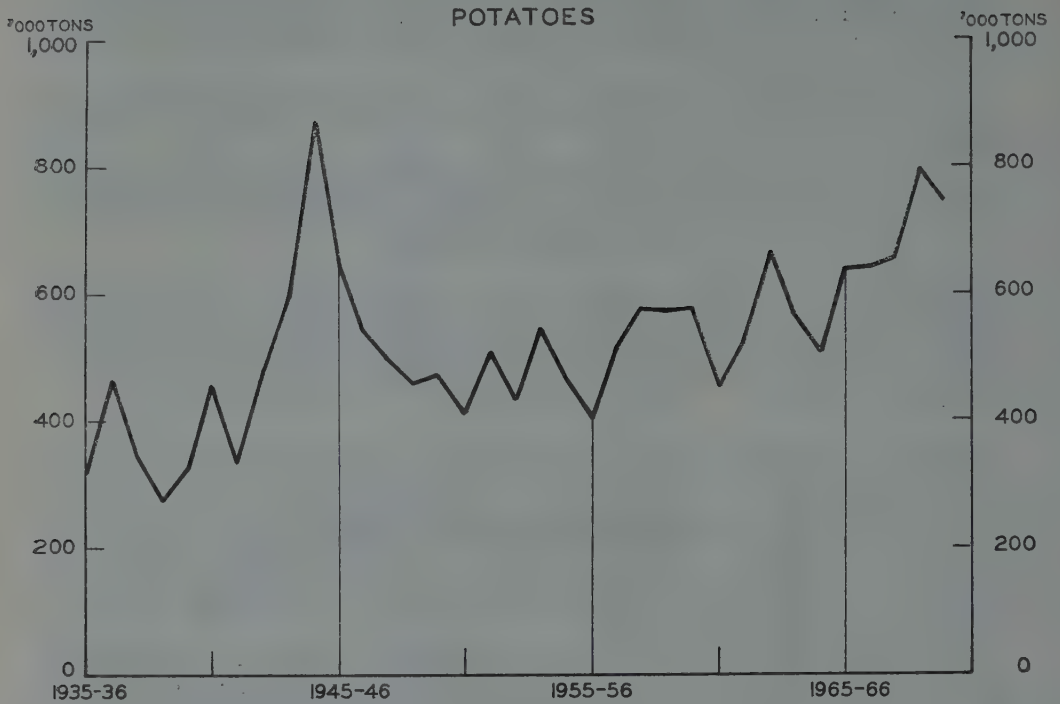


PLATE 40

*Potato marketing boards* were established in all States except Tasmania under separate State legislation after Commonwealth control of potato marketing under war-time legislation ceased at the end of 1948. The life of the Queensland Board was not extended when its term ended in 1954. The New South Wales Board was voted out by growers in 1956, and the Victorian Board also ceased functioning in that year. The Boards in South Australia and Western Australia are the only statutory boards still in operation.

*Value of potato crop.* The estimated gross value of the potato crop of each State for the 1969-70 season and the value per acre are shown in the following table.

**POTATOES: VALUE OF CROP, STATES, 1969-70**

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(a)</i>
Aggregate value	\$'000	7,442	17,002	5,033	2,610	5,390	3,098	40,575
Value per acre	\$	288	428	284	325	851	331	379

(a) Excludes Australian Capital Territory.

*Consumption and exports of potatoes.* The annual consumption of potatoes in Australia during each of the three years 1967-68 to 1969-70 amounted to 587,700 tons, 729,500 tons and 679,300 tons respectively or 110.4 lb, 134.3 lb and 122.3 lb respectively per head of population. These figures exclude the quantities used for seed, which averaged about 55,000 tons annually over this period. Details showing exports and imports for the years 1965-66 to 1969-70 are given in the following table.

**POTATOES: EXPORTS AND IMPORTS, AUSTRALIA  
1965-66 TO 1969-70**

<i>Year</i>	<i>Exports</i>		<i>Imports</i>	
	<i>Quantity</i>	<i>Value</i>	<i>Quantity</i>	<i>Value</i>
	tons	\$'000 f.o.b.	tons	\$'000 f.o.b.
1965-66	10,064	626	7,208	455
1966-67	13,593	839	..	..
1967-68	8,150	693	..	..
1968-69	12,591	966	237	12
1969-70	20,584	1,474	..	..

Western Australia has emerged in recent years as the principal exporting State, accounting for two-thirds of the Australian total in 1969-70. Australia's principal markets are Singapore, Ceylon, Papua and New Guinea, and Malaysia.

## Fruit

The varieties of fruit grown differ in various parts of the States, ranging from pineapples, papaws and mangoes in the tropics to strawberries, raspberries and currants in the colder parts of the temperate zone. In New South Wales citrus fruit (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums, pears, and cherries are grown extensively. The principal varieties grown in Victoria are apples, pears, peaches, oranges, and apricots. In Queensland apples, pineapples, bananas, oranges, mandarins, peaches, and plums are the major fruits cultivated. In South Australia, in addition to oranges, apples, peaches, apricots, and pears, almonds and olives are grown extensively. In Western Australia apples, oranges, plums, and pears are the chief varieties. In Tasmania apples occupy over three-quarters of the fruit-growing area, but small fruit, such as currants, raspberries and gooseberries, are grown extensively, the balance of the area being mainly taken up with pears and apricots.

### Overseas marketing of fruits

Details of the overseas marketing of fruits were published in Year Book No. 55 and earlier issues.

### Area and production of fruit

The total area under fruit in Australia has decreased since 1965-66 by 3,753 acres to 309,454 acres in 1969-70.

**FRUIT: AREA(a), STATES AND TERRITORIES, 1965-66 TO 1969-70**  
(Acres)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1965-66	97,212	75,001	47,715	43,986	26,715	22,426	110	42	313,207
1966-67	96,482	73,519	50,058	44,157	26,458	22,343	133	38	313,188
1967-68	95,798	71,158	51,391	45,113	25,598	21,762	98	37	310,955
1968-69	94,685	71,598	52,750	44,497	25,366	21,429	90	32	310,447
1969-70	95,326	70,883	53,048	44,801	24,130	21,157	71	38	309,454

(a) Bearing and not bearing.

**FRUIT: AREA AND PRODUCTION, STATES AND TERRITORIES, 1969-70**

Fruit	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES)(a)									
Apples	19,014	20,910	13,570	5,886	14,371	17,846	..	33	91,630
Apricots	1,709	3,007	513	4,360	254	347	..	..	10,190
Bananas	20,135	..	5,644	..	535	..	(b)	..	(c)26,314
Cherries	3,177	2,067	6	589	45	43	..	..	5,927
Citrus—									
Oranges	27,416	6,540	3,290	17,207	4,296	..	38	..	58,787
Mandarins	2,435	670	2,790	1,013	617	..	1	..	7,526
Lemons and limes	2,964	1,047	412	1,033	495	..	3	..	5,954
Other	843	331	188	532	111	..	3	..	2,008
Nuts	194	209	1,124	5,248	59	..	15	..	6,849
Peaches	7,595	13,747	1,735	4,495	787	36	..	..	28,395
Pears	3,050	17,006	1,208	1,903	973	1,349	..	..	25,489
Pineapples	223	..	15,703	..	..	..	(b)	..	(c)15,926
Plums	1,858	1,397	1,567	745	1,034	39	..	..	10,069
Prunes	3,260	169	..						
Small fruit	80	919	330	197	17	1,469	..	..	3,012
Other fruit	1,373	2,864	4,968	1,593	536	28	11	5	11,378
<b>Total</b>	<b>95,326</b>	<b>70,883</b>	<b>53,048</b>	<b>44,801</b>	<b>24,130</b>	<b>21,157</b>	<b>71</b>	<b>38</b>	<b>309,454</b>

**PRODUCTION ('000 BUSHELS)**

Apples	4,100	5,331	1,250	1,561	2,610	7,400	..	7	22,259
Apricots	219	574	22	936	35	28	..	..	1,814
Bananas	3,788	..	1,084	..	255	..	(b)	..	(c)5,127
Cherries	135	142	..	55	2	2	..	..	337
Citrus—									
Oranges	5,440	1,280	661	2,974	430	..	2	..	10,787
Mandarins	259	78	448	83	38	..	..	..	906
Lemons and limes	629	164	135	77	141	..	1	..	1,146
Peaches	1,186	2,975	131	1,092	126	3	..	..	5,513
Pears	816	7,044	119	644	212	496	..	..	9,331
Pineapples	39	..	6,305	..	..	..	(b)	..	(c)6,344
Plums	128	114	88	69	138	6	..	..	985
Prunes	424	18	..						

(a) Bearing and not bearing. (b) Not available for publication. (c) Incomplete: see individual States.



## Principal fruit crops

## PRINCIPAL FRUIT CROPS: AREA, PRODUCTION, AND GROSS VALUE OF PRODUCTION, AUSTRALIA, 1965-66 TO 1969-70

Year	Apples	Apricots	Bananas	Oranges	Peaches	Pears	Pineapples	Plums and prunes
AREA (ACRES)(a)								
1965-66	94,865	11,427	26,555	61,517	30,036	25,941	12,938	10,474
1966-67	94,973	11,313	26,213	60,982	30,068	25,558	15,073	10,157
1967-68	92,591	10,925	26,398	59,830	29,735	25,627	15,550	10,026
1968-69	92,957	10,578	25,756	59,702	28,597	25,555	15,728	10,001
1969-70	91,630	10,190	26,314	58,787	28,395	25,489	15,926	10,069
PRODUCTION ('000 BUSHELS)								
1965-66	19,783	1,778	4,694	9,137	5,508	7,485	4,924	952
1966-67	19,418	2,405	4,901	10,677	5,913	6,557	6,059	1,204
1967-68	19,615	1,519	5,145	9,846	6,294	7,351	6,804	778
1968-69	22,174	2,004	4,940	12,137	5,280	5,245	6,363	904
1969-70	22,259	1,814	5,127	10,787	5,513	9,331	6,344	985
GROSS VALUE OF PRODUCTION (\$'000)								
1965-66	47,631	5,119	20,409	22,037	13,795	17,674	6,165	3,419
1966-67	52,108	6,912	20,319	25,327	13,912	15,913	7,137	5,149
1967-68	49,741	4,637	19,636	24,496	14,123	16,469	6,470	3,362
1968-69	56,146	6,992	19,128	26,095	12,685	13,512	7,482	4,697
1969-70	56,120	7,438	24,961	29,026	15,101	23,809	7,144	5,828

(a) Bearing and not bearing.

## Production and consumption of jams and jellies and preserved fruit

In Australia considerable quantities of fruit are used in the production of jams and jellies and for preserving. The statistics of fruit usage in factories for 1968-69 and 1969-70 are not yet available. However, during 1969-70 output of jams, conserves, fruit spreads, etc., amounted to 79,643,000 lb, while output of preserved fruit amounted to 678,721,000 lb. Of the latter figure, peaches accounted for 180,796,000 lb, pears 200,394,000 lb, and pineapples 72,184,000 lb.

In 1967-68, 9,102,000 cwt of fruit was recorded as used in factories classified to the sub-classes Oils, vegetable; Jam, fruit and vegetable canning; Condiments, coffee, spices; Aerated waters and cordials; and Dehydrated fruit and vegetables. Figures for 1968-69 and 1969-70 are not yet available. Details of the estimated consumption of fruit and fruit products per head of population for a series of years ending 1969-70 are shown in Chapter 30, Miscellaneous.

## Imports and exports of fruit and fruit products

The imports of fresh fruit into Australia are negligible, while those of dried fruit consist mainly of dates obtained almost entirely from Iraq and Iran. A considerable export trade in both fresh, chilled and dried fruit is carried on by Australia with overseas countries. The values of the shipments in 1969-70 amounted to \$31,011,000 and \$16,078,000 respectively. Apples constitute the bulk of the fresh fruit exported, although exports of pears and citrus fruits are considerable.

## FRESH AND CHILLED FRUIT: EXPORTS, AUSTRALIA, 1965-66 TO 1969-70

Year	Apples		Pears		Citrus		Total value(a)
	Quantity	Value	Quantity	Value	Quantity	Value	
	'000lb	\$'000	'000lb	\$'000	'000lb	\$'000	\$'000
		f.o.b.		f.o.b.		f.o.b.	f.o.b.
1965-66	351,246	25,863	94,005	7,464	58,080	3,685	37,819
1966-67	288,834	18,280	64,620	4,800	58,656	3,779	27,869
1967-68	277,814	17,368	68,922	5,442	54,875	3,656	27,535
1968-69	287,135	19,964	46,652	4,107	68,312	4,423	29,456
1969-70	296,806	20,410	81,324	6,486	48,113	3,216	31,011

(a) Includes exports of all other fresh and chilled fruit.

The quantity and value of overseas imports and exports of dried fruit, other than sultanas, raisins and currants, for the years 1965-66 to 1969-70 are shown below.

**DRIED TREE FRUIT(a): IMPORTS AND EXPORTS, AUSTRALIA  
1965-66 TO 1969-70**

Year	Imports(b)		Exports	
	Quantity	Value	Quantity	Value
	'000 lb	\$'000 f.o.b.	'000 lb	\$'000 f.o.b.
1965-66 . . .	8,145	557	11,907	2,450
1966-67 . . .	8,936	671	8,038	2,037
1967-68 . . .	8,996	750	8,027	2,016
1968-69 . . .	9,942	843	5,401	2,087
1969-70 . . .	11,728	1,113	4,828	1,716

(a) Excludes sultanas, raisins and currants dealt with separately under Vineyards (see pages 792-3). (b) Dates and figs only.

Exports of jams and jellies in 1969-70 were 6,036,000 lb valued at \$909,000, compared with 7,335,000 lb, valued at \$1,104,000 in 1968-69. Imports of jams and jellies in 1969-70 were 4,574,000 lb, valued at \$813,000, compared with 3,116,000 lb, valued at \$555,000 in 1968-69.

Large quantities of canned or bottled fruit are normally exported from Australia, the quantity recorded in 1969-70 being 293,417,000 lb, valued at \$37,231,000. Exports in 1969-70 were made up principally of peaches (124,528,000 lb), pears (82,020,000 lb), fruit salad (33,301,000 lb), pineapples (15,745,000 lb), and apricots (12,446,000 lb). In addition, the exports of pulped fruits during 1969-70 amounted to 1,572,000 lb valued at \$297,000.

The total value of preserved fruit and fruit preparations (including fruit juices) imported into Australia during 1969-70 was \$5,281,000. The value of exports of fruit juices in 1969-70 was \$901,000.

### Vineyards

Grapes require a warm to hot climate and a predominantly winter rainfall. Freedom from late spring frosts is essential. They are grown for wine-making, drying and, to a minor extent, for table use. In Australia wine is produced very largely from irrigated crops, as are dried fruits. Some of the better known wine producing areas are the Murray Valley (South Australia and Victoria), Barossa Valley and Southern Vales Areas (South Australia), the Murrumbidgee Irrigation Areas and the Hunter Valley (New South Wales), the Mildura, Rutherglen and Stawell districts of Victoria, and the Swan Valley (Western Australia). Nearly all the dried fruit is produced along the River Murray and its tributaries, with small localised areas in other States.

#### Area of vineyards

The area under vineyards in the 1969-70 season in Victoria and South Australia constituted 76 per cent of the total area of vineyards.

**VINEYARDS: AREA(a), STATES, 1965-66 TO 1969-70  
(Acres)**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
1965-66 . . .	21,292	48,617	3,268	58,730	8,215	140,122
1966-67 . . .	21,257	49,164	3,304	57,080	7,945	138,750
1967-68 . . .	22,155	48,725	3,400	58,129	7,665	140,074
1968-69 . . .	22,749	48,970	3,508	60,574	7,270	143,071
1969-70(b)—						
Drying . . .	7,936	38,194	..	4,929	(c)2,289	53,348
Table . . .	2,680	2,939	3,320	212	(c)1,150	10,301
Wine . . .	14,807	8,705	294	59,696	(c)3,209	86,711
<b>Total . . .</b>	<b>25,422</b>	<b>49,838</b>	<b>3,614</b>	<b>64,837</b>	<b>6,648</b>	<b>150,359</b>

(a) Bearing and not bearing.  
are put.

(b) Area of individual categories is shown according to ultimate use to which grapes are put. (c) Estimated.

### Wine industry

Australia produces wine of every type and also brandy. In recent years there has been a distinct trend towards greater consumption and production of unfortified or table wines. Until 1957-58 production of these wines (which include burgundy, claret, riesling, sauterne, and sparkling wines) was less than half that of the fortified varieties (sherries, ports, etc.). By 1968-69 production of table wines had exceeded the volume of fortified varieties and in 1969-70, production of unfortified wines exceeded fortified wines by 6.1 million gallons.

*The Wine Overseas Marketing Act* 1929-1966 was introduced to place the overseas marketing of wine on an orderly basis. The Australian Wine Board, consisting of representatives from wineries and distilleries, grape-growers and the Commonwealth Government, supervises the sale and distribution of Australian wine exported and recommends conditions under which export licences should be issued. The Board also engages in wine publicity and trade promotion activities both in Australia and overseas. In London the Board maintains an Australian Wine Centre, which is a medium for promoting interest in Australian wines and brandy. It is also a retail shop for the sale of these products. *The Wine Grapes Charges Act* 1929-1969 provides for the imposition of a levy on all grapes used in Australia for the manufacture of wine, brandy and spirit used for fortifying wine. The proceeds of the levy are used to meet the Board's projects in Australia and overseas and to defray the administrative expenses of the Board, which has no other source of income.

### Production and consumption of wine and brandy

In 1969-70 the total production of wine (beverage and distillation) in Australia was 63.3 million gallons, while total consumption of beverage wine was 24.4 million gallons (2.0 gallons per head of population). Similar particulars for 1968-69 are 51.9 million gallons and 22.0 million gallons (1.81 gallons per head of population) respectively.

WINE: PRODUCTION(a), STATES, 1965-66 TO 1969-70  
(<sup>'000</sup> gallons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Aust.
1965-66 . . .	6,439	3,151	24	23,884	627	34,125
1966-67 . . .	7,893	3,555	37	29,324	705	41,514
1967-68 . . .	8,350	5,180	31	30,055	616	44,231
1968-69 . . .	8,597	6,241	32	36,230	837	51,936
1969-70 . . .	11,529	7,251	31	43,754	769	63,334

(a) Net factory and farm production of beverage and distillation wine excluding the liquid gallonage of spirits added in wine fortifying.

BRANDY: PRODUCTION, SOUTH AUSTRALIA  
AND AUSTRALIA, 1965-66 TO 1969-70  
(Proof gallons)

Year	S.A.	Aust.(a)
1965-66 . . . .	1,167,309	1,371,217
1966-67 . . . .	650,618	791,163
1967-68 . . . .	715,147	872,428
1968-69 . . . .	848,225	1,068,030
1969-70 . . . .	1,140,010	1,257,781

(a) Includes New South Wales and Victoria, for which separate details are not available for publication.

### Exports and imports of wine and brandy

Principal markets for exports of Australian wine are the United Kingdom, Canada and New Zealand. During 1969-70 these countries received 447,000 gallons, 433,000 gallons and 71,000 gallons respectively. Exports of Australian-produced wine for the five years ended 1969-70 are shown in the following table.

## WINE: EXPORTS, AUSTRALIA, 1965-66 TO 1969-70

Year	Quantity ('000 gals)			Value (\$'000 f.o.b.)		
	Sparkling	Other	Total	Sparkling	Other	Total
1965-66	35	1,922	1,957	171	3,364	3,535
1966-67	65	1,709	1,774	251	2,917	3,169
1967-68	88	1,751	1,839	359	2,794	3,153
1968-69	73	1,729	1,802	314	3,081	3,395
1969-70	83	1,212	1,295	348	2,565	2,913

Imports of wine for 1969-70 amounted to 430,000 gallons valued at \$1,922,000, compared with 456,000 gallons valued at \$1,883,000 in the previous year. During 1969-70 Italy supplied 155,000 gallons valued at \$571,000, France 84,000 gallons valued at \$644,000 and Portugal 66,000 gallons valued at \$207,000.

Exports of Australian-produced brandy in 1969-70 amounted to 106,000 proof gallons, valued at \$502,000. Imports of brandy, mainly from France, amounted to 238,000 proof gallons, valued at \$965,000.

## Dried vine fruit industries

The dry period from November to March in the lower **Murray** valley makes this an ideal area for dried vine fruit. Harvesting for drying takes place at the end of summer. The sun-drying process is often accelerated by using a dip of cold potash.

The *Dried Fruits Export Control Act* 1924-1966. For details of the *Dried Fruits Export Control Act* 1924-1966 see Year Book No. 55, page 877, and earlier issues.

For details of the bulk purchase agreements between the Governments of the United Kingdom and Australia which operated during the period 1946-53 see Year Book No. 40, page 888. From 1 December 1953 exports to the United Kingdom have been on a trader to trader basis.

In June 1963 Australian, Greek and Turkish dried vine fruit interests concluded an agreement to maintain minimum prices for sultanas on world markets. The agreement, which aims at international price stability, is periodically reviewed. A permanent committee of the contracting parties was established in London for the purpose of supervising the working of the agreement, and a sub-committee of the permanent committee was established in Hamburg in 1964.

The *Dried Vine Fruits Stabilization Act* 1964-1966. For details of the first Dried Vine Fruits Stabilization Scheme, which expired with the disposal of the 1968 crop, see Year Book No. 55, page 877, and earlier issues. Negotiations are in progress for a new stabilization plan.

## DRIED VINE FRUIT: PRODUCTION, STATES, 1965-66 TO 1969-70

(Tons)

Year	N.S.W.		Vic.		S.A.		W.A.		Aust.	
	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants	Raisins (a)	Cur- rants
1965-66	11,480	449	59,418	3,127	11,915	3,153	116	1,306	82,929	8,035
1966-67	14,108	643	69,628	3,588	13,544	3,773	67	1,353	97,347	9,357
1967-68	12,119	505	59,222	3,166	5,200	3,112	40	1,668	76,581	8,451
1968-69	7,829	428	37,896	2,687	1,743	2,261	8	1,862	47,476	7,238
1969-70	14,118	651	67,070	3,383	3,169	3,325	8	1,068	84,365	8,427

(a) Includes sultanas and lexias.



## DRIED VINE FRUIT (a): EXPORTS, AUSTRALIA, 1965-66 TO 1969-70

Year	Raisins, sultanas and lexias		Currants		Total	
	Quantity	Value	Quantity	Value	Quantity	Value
		\$'000		\$'000		\$'000
	tons	f.o.b.	tons	f.o.b.	tons	f.o.b.
1965-66 . . . . .	74,704	24,070	6,102	1,918	80,805	25,988
1966-67 . . . . .	63,561	19,720	4,301	1,428	67,862	21,148
1967-68 . . . . .	63,562	19,459	3,907	1,316	67,469	20,775
1968-69 . . . . .	58,070	18,310	3,437	1,203	61,507	19,513
1969-70 . . . . .	40,631	13,383	2,793	979	43,424	14,362

(a) Excludes quantities exported as mincemeat.

The chief countries importing Australian dried vine fruit are the United Kingdom, Canada, the Federal Republic of Germany, and Jamaica. The quantities exported to these countries in 1969-70 were 18,290 tons, 11,348 tons, 2,746 tons and 1,249 tons respectively.

## Table grapes

Grapes for table use are grown in all States except Tasmania, but the area of this type was only about 7 per cent of the productive area of vines in 1969-70. The quantities of table grapes produced during the season 1969-70 in each State are shown on page 749.

## PASTORAL PRODUCTION

## Livestock numbers

A detailed account of the various enumerations of livestock in Australia made prior to 1860 was given on page 748 of Year Book No. 35. Since 1860 annual enumerations have been made, based, with few exceptions, on actual collections made through the agency of the State police or by post. Particulars concerning the numbers of each of the principal kinds of livestock in Australia, at decennial intervals from 1860 to 1960, and from 1966 onwards in single years, are given in the following table, and are shown continuously since 1870 on the graph on plate 41, page 795.

LIVESTOCK: AUSTRALIA, 1860 TO 1970  
('000)

Year	Horses	Cattle	Sheep	Pigs	Year	Horses	Cattle	Sheep	Pigs
1860 . . . . .	432	3,958	20,135	351	1940 . . . . .	1,699	13,080	119,305	1,455
1870 . . . . .	717	4,276	41,594	543	1950 . . . . .	1,057	14,640	112,891	1,123
1880 . . . . .	1,069	7,527	62,184	816	1960 . . . . .	640	16,503	155,174	1,424
1890 . . . . .	1,522	10,300	97,881	891	1966 . . . . .	n.a.	17,936	157,563	1,747
1900 . . . . .	1,610	8,640	70,603	950	1967 . . . . .	n.a.	18,270	164,237	1,804
1910 . . . . .	2,166	11,745	98,066	1,026	1968 . . . . .	n.a.	19,218	166,912	2,056
1920 . . . . .	2,416	13,500	81,796	764	1969 . . . . .	n.a.	20,611	174,605	2,253
1930 . . . . .	1,793	11,721	110,568	1,072	1970 . . . . .	456	22,162	180,080	2,398

While livestock numbers (particularly sheep) have increased substantially since 1860, marked fluctuations have taken place during the period, mainly on account of widespread droughts which have from time to time left their impressions on the pastoral history of Australia. These occurred in 1868, 1877, 1883-84, 1892, 1893, 1895, 1901-02, 1912, 1914, 1918, 1919, 1922-23, 1925-26, 1927-28, 1929-30, 1940-41, 1944-45 to 1946-47, and 1965-67. The years in which the numbers of livestock attained their peaks are as follows: horses, 1919 (2,527,000); cattle, 1970 (22,162,000); sheep, 1970 (180,080,000); and pigs, 1970 (2,398,000).

The distribution throughout Australia of sheep, beef cattle, dairy cattle and pigs at 31 March 1963 is shown in the maps on pages 1049 and 1050 and facing pages 1082 and 1083 of Year Book No. 50.

The numbers of horses, cattle, sheep, and pigs in each State and Territory are shown later in this chapter.

### Value of pastoral production and indexes of quantum and price

Values of pastoral production are shown for 1969-70 in the table following. Further details of values of pastoral production and indexes of quantum and price, together with details of the source of the information and an explanation of the terms used in this compilation will be found in Chapter 30, Miscellaneous.

### GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION: STATES AND TERRITORIES, 1969-70 (\$'000)

<i>State or Territory</i>	<i>Gross production valued at principal markets</i>	<i>Marketing costs</i>	<i>Local value of production</i>	<i>Value of materials used in process of production</i>	<i>Net value of production(a)</i>
New South Wales . . . . .	467,894	49,641	418,254	(b)45,221	373,033
Victoria . . . . .	385,025	28,540	356,485	48,751	307,734
Queensland . . . . .	301,577	24,449	277,128	47,002	230,126
South Australia . . . . .	148,939	9,940	138,999	21,662	117,337
Western Australia . . . . .	176,387	14,713	161,673	29,063	132,610
Tasmania . . . . .	38,532	2,917	35,615	11,388	24,226
Northern Territory . . . . .	21,247	3,589	17,658	n.a.	17,658
Australian Capital Territory . . . . .	2,031	159	1,872	152	1,720
<b>Australia . . . . .</b>	<b>1,541,632</b>	<b>133,948</b>	<b>1,407,684</b>	<b>203,239</b>	<b>1,204,444</b>

(a) No deduction has been made for depreciation and maintenance.

(b) No allowance has been made for costs of power, power kerosene, petrol and other oils.

## Sheep

### Distribution throughout Australia

With the exception of a short period in the early eighteen-sixties, when the flocks of Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising, although its relative importance has declined somewhat in recent years, due, among other factors, to heavy losses caused by drought conditions in 1965-66. Concurrently, there has been a marked increase in the sheep population of Western Australia, where figures have doubled in little more than a decade to give that State second position of importance in terms of sheep numbers.

A map showing the distribution of sheep in Australia at 31 March 1963 appears on page 1049 of Year Book No. 50. Graphs showing the number of sheep in Australia from 1870 onwards appear on plates 41 and 42 of this Year Book (pages 795 and 804).

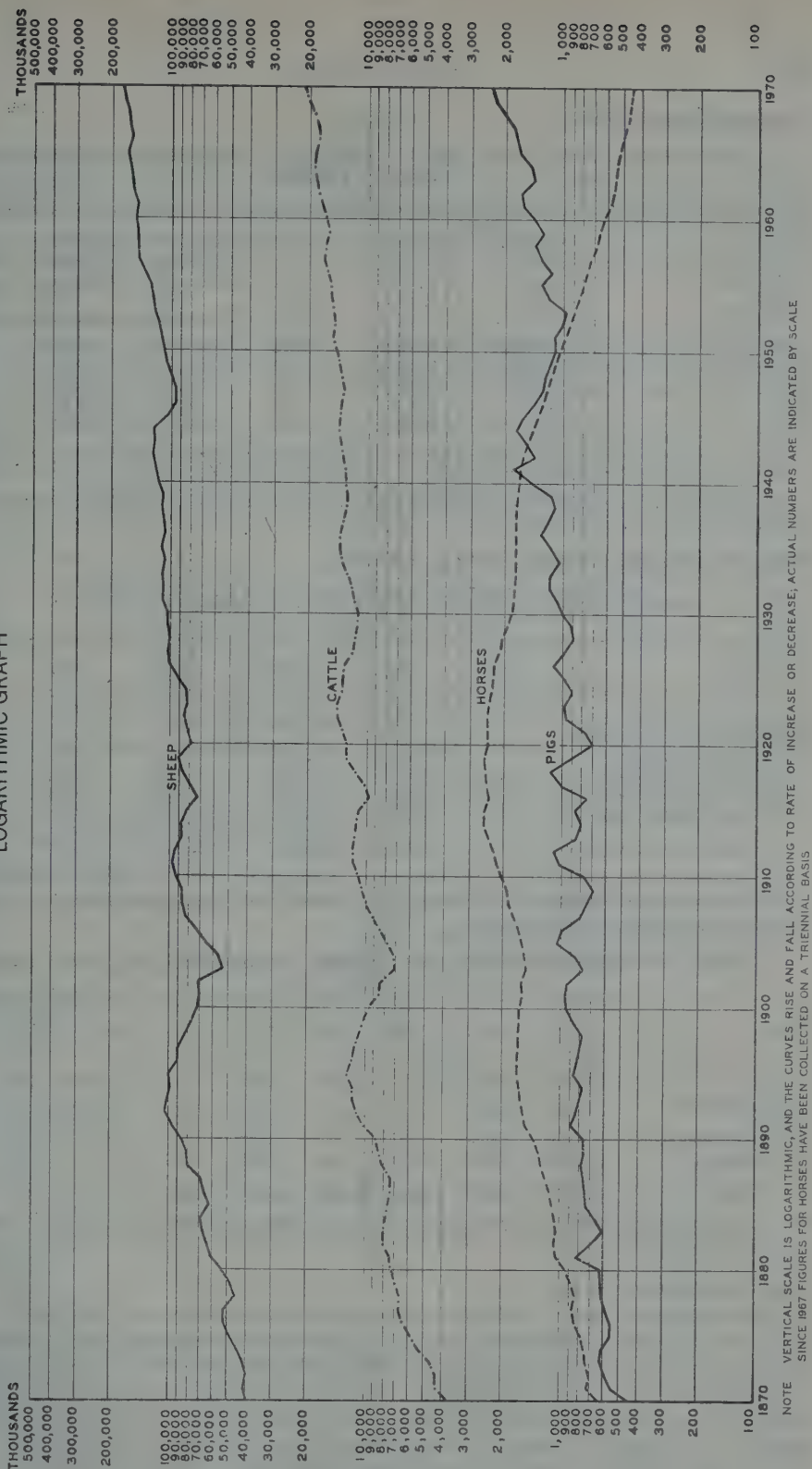
### SHEEP: NUMBERS IN STATES AND TERRITORIES, 1966 TO 1970 ('000)

<i>Year Ended 31 March</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1966 . . . . .	61,396	30,968	18,384	17,993	24,427	4,127	9	258	157,563
1967 . . . . .	63,848	31,239	19,305	17,864	27,370	4,321	8	281	164,237
1968 . . . . .	67,786	27,909	19,948	16,405	30,161	4,428	9	267	166,912
1969 . . . . .	68,153	30,185	20,324	18,392	32,901	4,395	10	246	174,605
1970 . . . . .	72,284	33,157	16,446	19,747	33,634	4,560	8	244	180,080

The percentage distribution of sheep and lambs in the several States in 1970 was: New South Wales, 40; Victoria, 18; Queensland, 9; South Australia, 11; Western Australia, 19; and Tasmania, 3.

# LIVESTOCK: AUSTRALIA, 1870 TO 1970

LOGARITHMIC GRAPH



NOTE: VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE; ACTUAL NUMBERS ARE INDICATED BY SCALE. SINCE 1967 FIGURES FOR HORSES HAVE BEEN COLLECTED ON A TRIENNIAL BASIS.

## Movement in Sheep numbers

SHEEP AND LAMBS: ANALYSIS OF MOVEMENT IN NUMBERS, AUSTRALIA  
1965-66 TO 1969-70

('000)

Year ended 31 March	Numbers at beginning of season	Lambs marked	Net exports	Sheep and lambs Slaughtered (a)	Estimated deaths on farms (b)	Numbers at close of season
1966 . . . .	170,622	40,330	273	33,671	19,445	157,563
1967 . . . .	157,563	47,830	337	33,350	7,469	164,237
1968 . . . .	164,237	50,648	362	38,145	9,466	166,912
1969 . . . .	166,912	51,171	361	35,676	7,441	174,605
1970 . . . .	174,605	56,784	487	41,045	9,777	180,080

(a) Includes an estimate for numbers boiled down. (b) Balance figure; excludes lambs which died before marking.

Comparisons of Australian flock numbers with those of certain other principal sheep-producing countries are given on page 809.

## Classification of sheep according to age, sex, and breed

## SHEEP, BY AGE AND SEX: AUSTRALIA, 31 MARCH 1966 TO 1970

('000)

Description	1966	1967	1968	1969	1970
Rams, 1 year and over . . . .	2,002	2,013	2,079	2,184	2,200
Breeding ewes (including ewes intended for mating) . . . .	73,626	76,618	77,872	83,607	85,474
Other ewes, 1 year and over . . . .	7,397	7,117	6,700	6,424	6,483
Wethers, 1 year and over . . . .	45,649	44,186	42,512	45,178	45,441
Lambs and hoggets, under 1 year . . . .	28,890	34,302	37,750	37,212	40,482
Total, sheep and lambs . . . .	157,563	164,237	166,912	174,605	180,080

Particulars of the principal breeds of sheep at 31 March 1968 (details are collected on a triennial basis) are shown in the following table.

## SHEEP, BY PRINCIPAL BREED: STATES AND TERRITORIES, 31 MARCH 1968

('000)

Breed	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Merino . . . .	48,977	12,810	19,414	13,418	27,286	315	9	209	122,438
Other recognised breeds . . . .	6,333	6,909	203	1,383	1,304	2,809	..	14	18,954
Merino comeback(a) . . . .	1,846	1,584	52	214	339	476	..	5	4,516
Crossbreds(b) . . . .	10,630	6,605	279	1,391	1,232	829	..	39	21,005
Total . . . .	67,786	27,909	19,948	16,405	30,161	4,428	9	267	166,912

(a) Merino comeback is the progeny of a crossbred Merino ewe and a Merino ram, i.e. finer than half-bred. (b) Half-bred and coarser.

## Exports and imports of sheep

The movement of sheep to and from Australia is governed under Customs regulations. Exports of both breeding and slaughter sheep are subject to the provision of a permit from the Department of Primary Industry. For most breeds, these permits are freely granted. However, the export of breeding merinos has been banned since 1929. There was a partial relaxation of this ban for the period February 1970—February 1971, whereby up to 300 merino rams could be purchased at public auction for export. This partial relaxation has now been extended for a further twelve months on the same terms. The export of other merino breeding sheep and of merino semen is still prohibited.

Since June, 1958, there has been a prohibition on the import of sheep to protect the Australian sheep industry from the introduction of exotic diseases, such as 'blue-tongue'.



## Cattle

## Objects of cattle-raising in Australia

Cattle-raising is carried out in all States, the main object in certain districts being the production of stock suitable for slaughtering purposes and in others the raising of profitable dairy herds. While dairy cattle are restricted mainly to coastal districts, beef cattle are more widely distributed, particularly in the eastern States, and are raised in areas unsuitable for dairy cattle, such as the tropical area of northern Queensland, the Northern Territory and the Kimberley district in the north of Western Australia.

## Distribution throughout Australia

Although cattle numbers declined after 1957 because of drought conditions and heavy slaughtering, they began to rise again in 1960 and in 1964 reached 19,055,000. Again because of drought in the eastern States, this figure declined to 17,936,000 in 1966, but recovered to reach a record level of 22,162,000 in 1969-70.

A graph showing the number of cattle in Australia from 1870 onwards appears on plate 41, page 795.

## CATTLE: NUMBERS IN STATES AND TERRITORIES, 1966 TO 1970

('000)

Year ended 31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966	4,153	3,397	6,888	690	1,271	492	1,032	13	17,936
1967	4,146	3,528	6,919	687	1,357	522	1,097	14	18,270
1968	4,555	3,474	7,361	695	1,427	564	1,130	13	19,218
1969	4,864	3,878	7,668	865	1,546	586	1,190	14	20,611
1970	5,637	4,462	7,515	1,026	1,681	646	1,179	15	22,162

The percentage of cattle in each State and Territory during 1970 was: New South Wales, 25; Victoria, 20; Queensland, 34; South Australia, 5; Western Australia, 8; Tasmania, 3; and Northern Territory, 5.

Maps showing the distribution of beef and dairy cattle in Australia appear on page 1050 and facing page 1082 of Year Book No. 50, and maps showing the distribution in earlier years were published in previous issues of the Year Book.

## Classification of cattle

## CATTLE, BY PURPOSE, AGE AND SEX: STATES AND TERRITORIES, 31 MARCH 1970

('000)

Classification	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Bulls (1 year and over) used or intended for service—									
Dairy breeds	13	33	11	5	3	3	..	..	69
Beef breeds	89	54	135	17	27	8	32	..	363
Total bulls	102	88	147	22	30	11	32	..	432
Cattle used or intended for production of—									
Milk or cream for sale—									
Cows (in milk and dry)	568	1,245	460	142	101	155	..	1	2,673
Heifers—Springing (within 3 months of calving)									
Other (1 year and over)	141	321	122	19	37	38	1	..	703
Calves (under 1 year)	107	335	78	37	33	40	..	..	631
Milk or cream for use on rural holdings—									
House cows and heifers	81	25	32	6	7	5	..	..	156
Total cattle production of milk, etc.	898	1,927	692	229	178	237	1	2	4,164
Cattle for other purposes(a)—									
Cows and heifers (1 year and over)	2,529	1,222	3,441	427	754	181	687	8	9,249
Calves (under 1 year)(b)	1,490	846	1,462	251	398	161	192	5	4,805
Other (1 year and over), i.e. steers, bullocks, spayed cows, etc.	618	379	1,773	97	321	56	267	1	3,512
Total cattle, other purposes	4,637	2,447	6,676	775	1,473	398	1,146	13	17,566
Total cattle and calves for all purposes	5,637	4,462	7,515	1,026	1,681	646	1,179	15	22,162

(a) Mainly for meat production. (b) Includes vealers, and bull calves intended for service.

**CATTLE, BY PURPOSE, AGE AND SEX: AUSTRALIA, 31 MARCH 1966 TO 1970**  
(<sup>'000</sup>)

<i>Classification</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1969</i>	<i>1970</i>
<b>Bulls (1 year and over) used or intended for service—</b>					
Dairy breeds . . . . .	90	87	82	77	69
Beef breeds . . . . .	261	279	299	323	363
<i>Total bulls</i> . . . . .	<i>351</i>	<i>367</i>	<i>381</i>	<i>400</i>	<i>432</i>
<b>Cattle used or intended for production of—</b>					
Milk or cream for sale—					
Cows (in milk and dry) . . . . .	2,908	2,881	2,794	2,700	2,673
Heifers—Springing (within 3 months of calving) and other (1 year and over) . . . . .	823	796	755	769	703
Calves (under 1 year) . . . . .	681	672	689	624	631
Milk or cream for use on rural holdings—					
House cows and heifers . . . . .	186	180	169	165	156
<i>Total cattle, production of milk, etc.</i> . . . .	<i>4,598</i>	<i>4,528</i>	<i>4,407</i>	<i>4,258</i>	<i>4,164</i>
<b>Cattle for other purposes(a)—</b>					
Cows and heifers (1 year and over) . . . . .	6,692	6,886	7,450	8,333	9,249
Calves (under 1 year) (b) . . . . .	3,063	3,392	3,868	4,218	4,805
Other (1 year and over), i.e. steers, bullocks, speyed cows, etc. . . . .	3,232	3,097	3,113	3,403	3,512
<i>Total cattle, other purposes</i> . . . . .	<i>12,987</i>	<i>13,375</i>	<i>14,431</i>	<i>15,954</i>	<i>17,566</i>
<b>Total cattle and calves for all purposes</b> . . . . .	<b>17,936</b>	<b>18,270</b>	<b>19,218</b>	<b>20,611</b>	<b>22,162</b>

(a) Mainly for meat production. (b) Includes vealers, and bull calves intended for service.

For beef cattle and dairy cattle numbers prior to 1964 see pages 1056 and 1078 respectively of Year Book No. 50.

#### Exports and imports of cattle

In 1969–70 the number of cattle exported was 1,647, valued at \$392,000 (1968–69, 3,301 valued at \$738,000). Prior to June 1958 small numbers of cattle were imported, consisting mainly of valuable animals for stud purposes. Since that date an embargo has been imposed on the import of cattle in order to prevent the introduction of the disease 'blue-tongue'.

#### Comparison with other countries

The following table shows the number of cattle in Australia and in some of the principal cattle-raising countries of the world at the latest available date.

#### CATTLE: NUMBERS IN VARIOUS COUNTRIES

*Source (for countries other than Australia): World Agricultural Production and Trade, United States Department of Agriculture*

(<sup>'000</sup>)

<i>Country</i>	<i>Year and month</i>	<i>Number p</i>
India(a) . . . . .	1962 (May) . . . . .	236,000
United States of America . . . . .	1970 (January) . . . . .	112,303
Brazil . . . . .	1970 (December) . . . . .	95,162
U.S.S.R. . . . .	1970 (January) . . . . .	95,258
China (mainland)(a) . . . . .	1960 (December) . . . . .	65,400
Argentina . . . . .	1970 (June) . . . . .	49,429
Pakistan(a) . . . . .	1961 (Estimate) . . . . .	30,300
Mexico . . . . .	1970 (December) . . . . .	25,123
Australia . . . . .	1970 (March) . . . . .	22,162
Ethiopia . . . . .	1963 (Estimate) . . . . .	22,000
France . . . . .	1970 (October) . . . . .	21,719
Colombia . . . . .	1970 (October) . . . . .	20,359
Turkey(a) . . . . .	1970 (December) . . . . .	14,367
Germany, Federal Republic of . . . . .	1970 (December) . . . . .	14,286
United Kingdom . . . . .	1970 (December) . . . . .	11,682
South Africa . . . . .	1970 (June) . . . . .	12,295

(a) Includes buffaloes.

## Horses

The number of horses in Australia reached a peak of 2,527,000 in 1919. Since then it has declined, because of mechanisation of transport and farming, and the number recorded at 31 March 1970 was 456,000. In future, particulars of horses, on a Commonwealth basis, will be collected only at triennial intervals.

A graph showing the number of horses in Australia since 1870 appears on plate 41, page 795.

**HORSES: NUMBERS IN STATES AND TERRITORIES, 1966 TO 1970**  
(<sup>'000</sup>)

31 March—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966 . .	151	n.a.	190	n.a.	35	n.a.	37	1	n.a.
1967 . .	146	55	182	16	35	7	38	1	479
1968 . .	n.a.	n.a.	181	n.a.	n.a.	n.a.	38	1	n.a.
1969 . .	132	n.a.	176	n.a.	n.a.	n.a.	39	1	n.a.
1970 . .	136	53	173	16	29	6	41	1	456

### Overseas trade in horses

Exports of Australian-bred horses in 1969–70 numbered 802, valued at \$2,225,000, made up of horses for breeding (166 valued at \$230,000), horses for racing (521 valued at \$1,959,000, shipped principally to New Zealand, Singapore and the United States of America), and horses for other purposes (115 valued at \$36,000). Horses imported into Australia in 1969–70 (1,003 valued at \$3,688,000) were mainly from New Zealand and the United Kingdom.

## Pastoral products: wool

With about one-sixth of the world's woolled sheep, Australia produces almost one-third of the world's wool and more than half the world's fine-quality Merino wool. The bulk of the production is exported, mainly as greasy wool, although substantial amounts of scoured and carbonised wool, wool on sheep skins and small quantities of semi-manufactured wool are also shipped. The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the table on page 809.

### Wool marketing

Details of past wool marketing schemes and agreements, including the 1914–18 War Imperial Purchase Scheme, the British Australian Wool Realization Association Ltd, the 1939–45 War Acquisition Scheme, Joint Organization, and the Reserve Price Plans of 1951 and 1965, are given in previous issues of the Year Book.

Approximately ninety per cent of the Australian wool clip is disposed of at auction. (During both world wars, however, auction selling was suspended and replaced by bulk purchase schemes). There are fourteen recognised wool-selling centres, namely Sydney, Goulburn, Newcastle, Albury, Melbourne, Geelong, Ballarat, Portland, Brisbane, Adelaide, Fremantle, Albany, Hobart, and Launceston. At these centres wool-selling brokers operate large stores where wool received from growers is held awaiting sale.

Each year a wool-selling programme is drawn up by the Joint Wool Selling Organisation representing wool growers, selling brokers and wool-buyers on the basis of the expected clip. Selling dates and the quantities to be offered are then determined for each centre. Before each sale the selling brokers, who act as agents for the wool-growers, display a representative portion of the wool to be sold on show floors for buyers' inspection and valuation. Auction sales are attended by buyers purchasing on behalf of wool users in more than fifty countries.

### Wool Marketing Committee of Enquiry

In 1961 the Commonwealth Government appointed an independent committee to inquire into the marketing and promotion of Australian wool and related matters (see Year Book No. 48, page 977, for further details). The Committee presented its report to the Government in 1962. Its most important recommendation was that wool promotion, research and testing should be brought under the control of a single body, which should also act as an advisory authority on wool marketing. This recommendation was implemented under the *Wool Industry Act 1962–1970* which set up the Australian Wool Board.



### The Australian Wool Industry Conference

This body was formed by woolgrowers in October 1962 to meet the need for an organisation with sufficient authority to speak on behalf of the woolgrowing industry as a whole. It is not a statutory body and consists of twenty-five members each from the Australian Woolgrowers' and Graziers' Council and the Australian Wool and Meat Producers' Federation. The fifty member conference is presided over by an independent chairman.

The Conference makes recommendations to the Commonwealth Government on policy matters concerning the wool industry. Under the Wool Industry Act it is the responsibility of the Conference to nominate woolgrower representatives for appointment to the Australian Wool Board. Under the Wool Tax Acts (*see* page 550) the Conference is also responsible for recommending to the Commonwealth Government what rates of levy should be paid by woolgrowers to finance the activities of the Wool Board and the wool research programme.

### Australian Wool Board

This Board constituted under the *Wool Industry Act* 1962-1970, consists of a chairman, six woolgrower representatives, three members with special qualifications, and a representative of the Commonwealth Government. The first chairman of the Board was appointed by the Minister for Primary Industry after consultation with the Australian Wool Industry Conference, but subsequent chairmen will be appointed by the Minister for Primary Industry after consultation with the Board. The six woolgrower representatives are appointed by the Minister on the nomination of the Wool Industry Conference, and the three members with special qualifications are appointed by the Minister after consultation with the Conference.

When the Board came into being on 1 May 1963 it took over the functions of the Australian Wool Bureau. On 1 July 1963 the Australian Wool Testing Authority became part of the Board, and on 1 January 1964 the Board took over the functions of the Wool Research Committee. Information on these three former instrumentalities appears in Year Book No. 48, pages 977-81.

Following the organisational changes carried out under the *Wool Industry Act* 1970, the functions of the Board embrace the following activities.

*Wool promotion in Australia and overseas by publicity and other means.* Promotion overseas is carried out through the International Wool Secretariat, which is maintained jointly by the Wool Boards of Australia, New Zealand, South Africa and Uruguay.

*Provision of a testing service for wool and wool products.* This service is administered by a subsidiary board retaining the name Australian Wool Testing Authority.

*Wool Research.* The Board is required to advise the Minister for Primary Industry on the general scope of those research programmes of the C.S.I.R.O. and the Bureau of Agricultural Economics in relation to the needs of the wool industry. The Board is also responsible for recommending grants from the Wool Levy Fund to recipients other than the C.S.I.R.O. and the Bureau of Agricultural Economics.

*Investigation into all aspects of wool marketing on a continuing basis.* The Board is required to inquire into, and from time to time report to the Australian Wool Industry Conference upon, methods of marketing wool and related matters. However, the Board has no executive powers over marketing.

*Maintenance and administration of the wool stores which were entrusted to the Board by the Commonwealth Government.* Further details concerning these stores appear in Year Book No. 48, page 978.

*The establishment of integrated wool selling complexes.* The aim is to make the cost savings inherent in this wool handling technique available to the woolgrowing industry as soon as possible.

At present the main sources of finance for the various activities of the Board are a levy paid by woolgrowers and contributions by the Commonwealth Government, *see* below.

### Wool levy

Since 1936 a statutory levy has been collected from woolgrowers to finance wool promotion activities. The initial rate of 5c a bale was increased at the request of woolgrowers to 20c a bale in 1945 and 40c a bale in 1952, the latter rate continuing until 1960. Further details regarding the operation of this levy prior to 1957 appear in Year Book No. 48, page 978.

Under legislation passed in 1957 provision was also made for the payment by woolgrowers of a contribution for wool research which was fixed at 20c a bale. In 1960 the wool promotion levy was raised to 50c a bale, and the following year it was increased further to \$1 a bale. The operation of this rate was subsequently extended for 1962-63 and 1963-64.



On 1 July 1964 the basis for collecting the woolgrowers' combined levy for wool promotion and research was changed from a flat rate per bale to a percentage deduction from the gross value of shorn wool sold. A maximum rate of 2 per cent was fixed, but provision was made for a lower rate to be prescribed, if appropriate. For 1964-65 the rate was set at 1.875 per cent, which involved a substantial increase in payments by woolgrowers for promotion (from \$1 per bale to the equivalent of about \$2.70 per bale), while the research component of the levy was left unaltered at 20c per bale. In 1965-66 the levy was set at 2 per cent and it remained at the maximum rate till 1969-70. From 1 August 1970, the rate of levy was reduced to 1 per cent.

The imposition and collection of the combined levy from woolgrowers is governed by six complementary Acts, the Wool Tax Acts (Nos 1 to 5) 1964 and the *Wool Tax Administration Act* 1964-1966.

#### **Commonwealth Government's contributions to wool research and promotion**

In 1945 the Commonwealth Government commenced contributing on a statutory basis to wool research. Initially the contribution was at the rate of 20c a bale, but this was doubled in 1957 to 40c a bale. At this rate the Commonwealth Government contributed about \$2,000,000 to wool research in 1965-66, and a similar sum was provided in 1966-67.

Prior to 1964-65 the Commonwealth Government had not contributed to wool promotion. However, following representations made by the Australian Wool Industry Conference, the Commonwealth Government undertook to provide assistance to the Australian Wool Board in financing its commitment to the greatly expanded wool promotion programme of the International Wool Secretariat. The expanded wool promotion programme, announced by the Secretariat, envisaged an increase in the Wool Board's annual contribution to overseas wool promotion campaigns from the then level of \$5,000,000 to about \$20,000,000.

From 1 July 1964 the Commonwealth Government undertook to match on a \$1 for \$1 basis any increase in contributions by woolgrowers for wool promotion in excess of the levy of \$1 a bale then in force, and the Wool Industry Conference agreed to increase the growers' levy to the equivalent of about \$2.70 a bale, which resulted in a Commonwealth commitment of about \$1.70 a bale. In aggregate this commitment entailed a Commonwealth contribution for promotion of about \$8,500,000 a year. This arrangement operated until 30 June 1967.

During 1967 the Wool Industry Act was amended following negotiations between the Executive of the Australian Wool Industry Conference and the Government. The amendment provided for a Government contribution for wool research and promotion during the three years 1967-68 to 1969-70 on a \$1 for \$1 basis matching woolgrowers' contribution by levy, to a maximum of \$14,000,000 in any one year. It provided for the grower levy and the Government grant to be apportioned annually between wool research and promotion by the Minister for Primary Industry after considering the recommendations of the Australian Wool Industry Conference. No change occurred in the legislation providing for the payment by woolgrowers of a levy at a rate not exceeding two per cent per annum.

When arrangements for Government financial support for wool research and promotion expired on 30 June 1970, the Government increased its contributions for these activities to an average of \$27,000,000 a year for each of the three years 1970-71 to 1972-73. At the same time, as mentioned above, the levy on woolgrowers was reduced from 2 per cent to 1 per cent of the gross proceeds from the sale of shorn wool.

#### **Australian Wool Marketing Corporation Pty Ltd.**

On 31 October 1967 the Australian Wool Board presented to the Australian Wool Industry Conference a report containing proposals for the establishment of an authority to enforce standards of clip preparation, administer the elimination of one, two, and three bale lots, conduct a price averaging plan for these wools and others voluntarily submitted, and conduct, in conjunction with wool selling brokers, a system of supply management involving chiefly wools in the price averaging plan. The report also recommended the establishment of an organisation of woolgrowers, brokers, and buyers to conduct and control the sale of wool at auction.

A recommendation that these proposals, with some amendments, be implemented by a non-statutory Australian Wool Marketing Corporation was accepted by the Australian Wool Industry Conference in November 1968. The proposals were then submitted to the Government with a request for assistance in financing some of their elements. In September 1969 the Minister for Primary Industry announced details of assistance offered by the Government in response to this request. The Government undertook to meet, for a period of three years, half of the costs involved in handling one, two and three bale lots admitted to the price averaging plan and half of wool selling brokers' administrative charges relating to the price averaging plan, on the understanding that the Government would share equally in any reductions in these charges.

The Government also undertook to meet any losses, incurred by the Wool Marketing Corporation, on wool it may have purchased at the end of a price averaging period and sold in a subsequent

period. The Government's offer was conditional upon the Corporation undertaking to limit its activities to one, two and three bale lots and on the understanding that the total borrowings of the Corporation for the purchase and carry over of price averaging plan wool will not exceed \$14,000,000 at any one time.

The Government's offer was accepted by the Wool Industry Conference at its meeting in November 1969. Arrangements were immediately commenced by the Wool Board to bring the Wool Marketing Corporation into being. The Price Averaging Plan Wool Marketing Scheme, administered by the Corporation, came into operation on 1 July 1970. Included in the Corporation's responsibilities were the operation of the Wool Statistical Service and the Wool Classer Registration Scheme, both formerly administered by the Wool Board. The Wool Statistical Service (described in more detail in Year Book No. 48, pages 997-8) provides comprehensive statistics on the Australian wool clip, while the registration of wool classers is designed to improve the standards of wool classing in Australia.

On the establishment of the Australian Wool Commission (*see below*) in November 1970, the work of the Wool Marketing Corporation was taken over by the Commission. The Corporation will be formally wound up in 1971.

### The Australian Wool Commission

The Australian Wool Commission was established in November 1970 under the Australian *Wool Commission Act 1970* to operate a flexible reserve price scheme for wool sold at auction and to perform a number of other functions aimed at improving the marketing of Australian wool.

The Commission consists of seven members comprising a Chairman, two members to represent Australian woolgrowers, a Commonwealth Government representative, and three other members. The three other members are persons with special qualifications in the fields of marketing of wool or wool products; in the processing of wool or the manufacture of wool products; or in commerce, finance or economics. All members, including the Chairman, are appointed by the Minister for Primary Industry. The Chairman is to be a full-time member, appointed for a period of five years. Pending the appointment of a full-time Chairman, a part-time Interim Chairman was appointed in November 1970. All other members of the Commission serve on a part-time basis and are appointed for a period of three years. The Chairman is appointed by the Minister after consultation with the Australian Wool Board. The two woolgrower representatives are appointed after consultation with the Australian Wool Industry Conference. The three members with special qualifications are appointed after consultation with the Wool Board. The Act provides that the Chairman of the Commission should automatically become a member of the Wool Board, to ensure close liaison between the Board and the Commission.

Apart from operating a flexible reserve price scheme for wool, the Commission was empowered to take over the functions of The Australian Wool Marketing Corporation Pty Ltd (*see above*), which include the formulation of standards of clip preparation for wool sold at auction or otherwise and the making of arrangements to secure their observance; the elimination of small lots (except specialty wools) from sale at auction to the extent desirable; the operation of a Price Averaging Plan for wool from small lots; the payment of advances to growers whose wool is included in the Price Averaging Plan; the operation of the Wool Statistical Service; and the operation of a scheme for the voluntary registration of woolclassers.

The Commission also has the following additional functions and powers.

To operate, when judged appropriate by the Commission, a voluntary pool for wool other than that in small lots (i.e. for wool in lots exceeding three bales) and pay advances to owners of such wool.

To formulate the terms and conditions governing the sale of wool at auction and make arrangements for their adoption.

To make arrangements concerning wool auction sale rosters and offerings and to pay advances to growers the sale of whose wool has been delayed because of the arrangements made by the Commission.

To have power to sell wool outside the auction system or have wool processed before sale in cases where such wool cannot be sold advantageously at auction.

To encourage the progressive adoption of proven and practical technological aids to more efficient wool marketing.

To keep under review the operations of firms outside the auction system which purchase wool direct from growers and sell it to local and overseas users, and obtain from these firms such information as the Minister for Primary Industry approves for this purpose.

To make recommendations to the Government for suitable action to be taken if and when it can be clearly demonstrated that private buying and selling is having detrimental effects on wool marketing generally.



With the approval of the Minister for Primary Industry, to participate in negotiations concerning charges associated with the marketing of wool, including freight rates.

To co-operate with authorities and organisations in other countries in measures aimed at more efficient marketing of wool.

To co-operate with the Australian Wool Board and other authorities and organisations in regard to wool promotion and research, including inquiries into methods of marketing wool.

The working capital needed by the Commission (to purchase wool under its flexible reserve price scheme, to make advances to woolgrowers, etc.) is provided in the form of loans by the Commonwealth Government and by trading banks. The Commonwealth guarantees loans made by trading banks to the Commission.

Under the Act, the operating costs of the Commission are to be met jointly by woolgrowers and the Commonwealth Government. The Government provides half of the funds required for the re-handling and brokers' administration charges for the elimination of small lots under the Price Averaging Plan, and is to meet any losses that may result from time to time on the resale of wool purchased by the Commission. The balance of the operating costs of the Commission has to be met by woolgrowers.

### Wool production

Wool as shorn from the sheep contains an appreciable amount of grease, dirt and other extraneous matter, and is termed 'greasy wool'. The quantity of grease and other matter in a fleece differs not only between countries, but between districts in the same country. It fluctuates with the vagaries of the season, and with the breed and the condition of the sheep. To allow for this factor, the weight of greasy wool is sometimes given on a 'clean' basis, i.e. minus the estimated amount of impurities. The net wool fibre content of greasy wool, expressed as a percentage, is termed 'clean yield'.

From 1946-47 to 1952-53 the Australian Wool Realisation Commission, and from 1953-54, the Wool Statistical Service, have assessed annually the clean yield of the Australian wool clip. During the period of assessment the clean yield showed a continuous rise up to 1951-52, when it reached 57.5 per cent. It has since fluctuated between 55.7 per cent and 57.7 per cent. It was 56.6 per cent in 1969-70.

Wool scoured, washed and carbonised in Australia before export, however, has a clean yield somewhat lower than for the whole clip, because the grade of greasy wool treated locally for export as scoured, washed or carbonised contains quantities of dirty and low-grade wool. The quantity of scoured wool exports during 1969-70 was about 8 per cent of the total raw wool exports (excluding wool exported on skins) in terms of greasy. For the clean yield of Australian scoured wools exported a standard factor of 93 per cent is taken.

The production of wool in the States and Territories varies broadly in accordance with the number of sheep depastured and with seasonal conditions which affect clip per head (*see* page 805). In general, however, South Australia obtains from its large-framed merinos a much heavier fleece per sheep than the Australian average. In addition, as a result of better management (improved pastures, fodder conservation, better breeding, control of diseases, etc.), the long-term trend has been towards higher fleece weights.

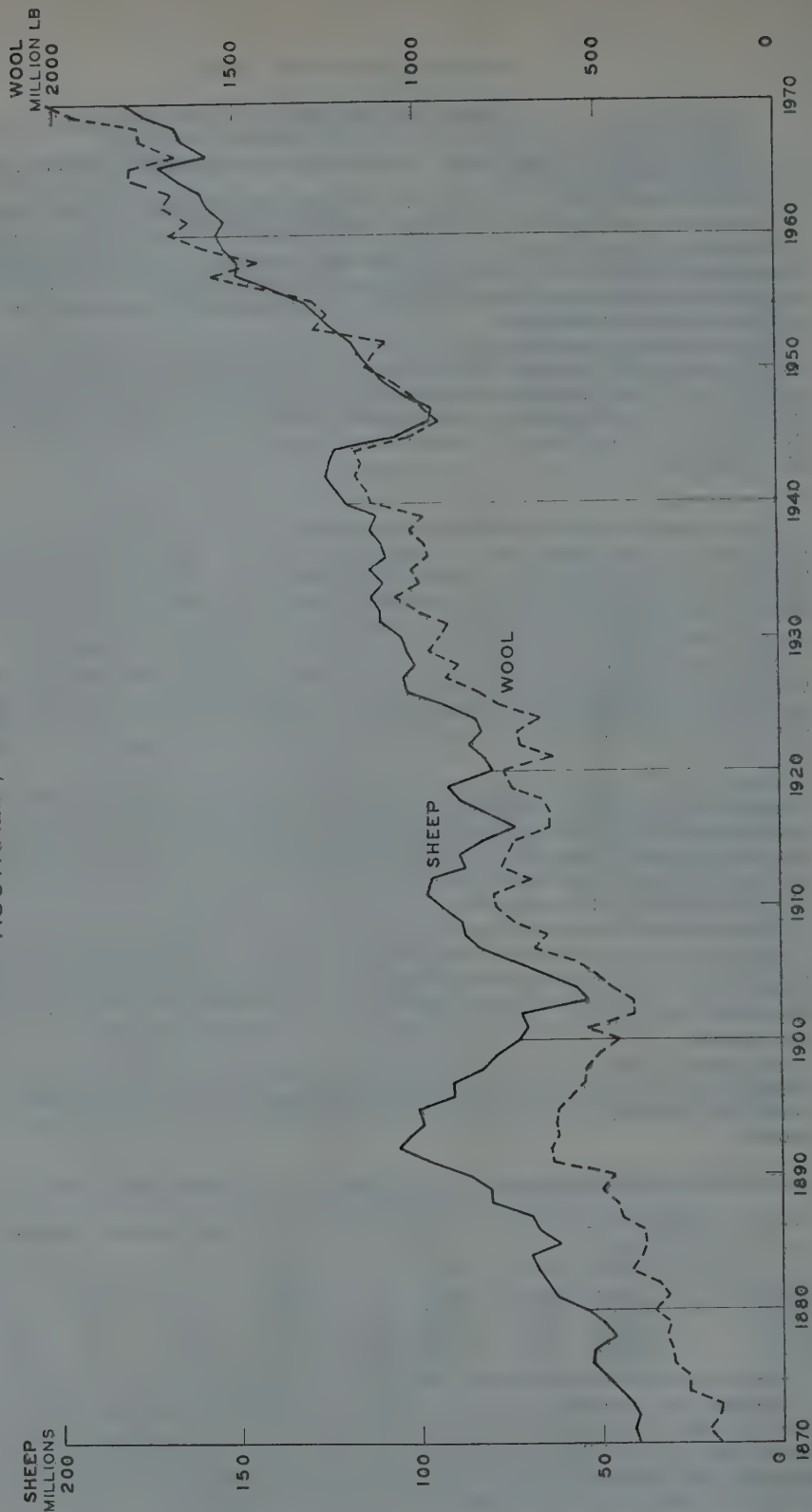
The following table shows details of total wool (i.e. shorn, dead and fellmongered, and exported on skins) produced by each of the States and Territories during the years 1965-66 to 1969-70. A graph showing the production of wool in relation to sheep numbers from 1870 onwards appears on plate 42 following.

PRODUCTION OF WOOL (GREASY BASIS): STATES AND TERRITORIES, 1965-66 TO 1969-70  
(<sup>'000 lb</sup>)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1965-66	579,475	366,943	192,773	232,296	247,530	41,858	88	1,873	1,662,836
1966-67	622,745	378,457	203,664	239,202	272,575	43,153	88	2,454	1,762,338
1967-68	650,420	332,427	226,822	218,951	300,229	38,308	112	2,238	1,769,507
1968-69	673,531	364,347	247,005	238,120	375,650	46,955	111	2,059	1,947,778
1969-70	749,840	427,206	196,353	275,005	336,474	48,195	111	2,555	2,035,738

The bulk of the Australian wool production (about 90 per cent in recent years) is shorn from live sheep. The remainder is obtained by fellmongering (less than 1.5 per cent) or is exported on skins (about 8 per cent). The following table shows details of total wool production according to method of obtaining wool, and also the gross value of wool produced. Gross value is based, for shorn wool, upon the average price realised for greasy wool sold at auction and, for skin wools, on prices recorded by fellmongers and skin exporters.

# SHEEP NUMBERS AND WOOL PRODUCTION AUSTRALIA, 1870 TO 1970





**QUANTITY (GREASY BASIS) AND VALUE OF WOOL PRODUCED  
AUSTRALIA, 1965-66 TO 1969-70**

Year		Shorn (including crutchings)	Dead and fell- mongered	Exported on skins	Total production	
					Quantity	Value
		'000 lb	'000 lb	'000 lb	'000 lb	\$'000
1965-66	.	1,503,457	24,411	134,968	1,662,836	808,437
1966-67	.	1,602,229	24,841	135,269	1,762,338	812,230
1967-68	.	1,605,056	23,944	140,507	1,769,507	709,524
1968-69	.	1,773,222	25,223	149,332	1,947,778	838,651
1969-70	.	1,848,381	22,271	165,087	2,035,738	735,233

## Average fleece weight

**AVERAGE WEIGHT OF FLEECES SHORN (SHEEP AND LAMBS)  
STATES AND TERRITORIES, 1965-66 TO 1969-70  
(lb)**

State or Territory	Sheep					Lambs				
	1965- 66	1966- 67	1967- 68	1968- 69	1969- 70	1965- 66	1966- 67	1967- 68	1968- 69	1969- 70
N.S.W.	8.65	10.01	9.87	10.06	10.86	2.99	3.21	3.16	3.56	3.58
Vic.	9.63	9.90	9.08	9.79	10.66	2.72	2.90	2.56	2.97	3.03
Qld	8.79	9.94	10.62	11.26	10.25	3.56	3.55	4.10	4.34	4.19
S.A.	12.72	12.75	12.25	13.41	13.83	3.73	3.90	3.38	3.93	4.12
W.A.	10.74	10.67	10.57	11.72	10.36	2.90	2.98	2.97	3.47	2.97
Tas.	10.34	10.22	8.62	10.62	10.70	2.48	2.54	2.28	2.66	2.55
N.T.	8.13	8.13	10.89	10.78	10.78	3.00	3.00	..	..	..
A.C.T.	7.33	9.81	8.67	8.54	11.29	1.82	1.64	1.65	1.67	1.82
Aust.	9.63	10.39	10.14	10.81	10.98	3.03	3.19	3.09	3.52	3.41

## Classification of wool according to quality

The following table provides a detailed analysis of wool sold at auction, according to quality, for the years 1965-66 to 1969-70. These data are compiled by the Wool Statistical Service on the basis of catalogues of auction sales. 'Quality' ('64's, 60's, 58's, etc.) is a measure of the fineness and texture of wool for spinning purposes. Broadly, it means the maximum number of hanks of yarn, each of 560 yards length, which can be spun from 1 lb of combed wool. For instance, wool of 64's quality is of a fineness and texture which will produce 64 hanks, each of 560 yards, from 1lb of tops (combed wool) of that particular wool.

**CLASSIFICATION OF GREASY WOOL SOLD AT AUCTION(a): AUSTRALIA  
1965-66 TO 1969-70**

(Bales of approximately 300 lb)

Predominating quality	1965-66		1966-67		1967-68		1968-69		1969-70	
	Quantity	Per cent	Quantity	Per cent	Quantity	Per cent	Quantity	Per cent	Quantity	Per cent
70's and finer	149,305	3.3	114,406	2.4	131,939	2.7	113,057	2.2	117,592	2.1
64/70's	402,134	8.8	292,158	6.2	270,039	5.6	203,969	3.9	193,644	3.5
64's	576,499	12.7	470,153	9.9	468,436	9.7	381,785	7.5	349,402	6.3
64/60's	373,796	8.2	403,917	8.5	427,884	8.8	401,844	7.9	441,895	8.0
60/64's	896,070	19.7	1,002,088	21.1	1,089,866	22.4	1,081,779	21.1	1,173,533	21.3
60's and 60/58's	900,760	19.8	1,016,979	21.5	1,073,517	22.1	1,228,214	24.0	1,395,028	25.3
Total, 60's and finer	3,298,564	72.5	3,299,701	69.6	3,461,681	71.3	3,410,648	66.6	3,671,094	66.5
58's	591,790	13.0	660,570	13.9	623,043	12.8	789,540	15.4	786,592	14.3
56's	386,169	8.5	461,182	9.7	433,505	8.9	514,587	10.1	549,550	10.0
50's	133,574	2.9	178,587	3.8	173,313	3.6	204,014	4.0	267,932	4.9
Below 50's	44,887	1.0	61,289	1.3	59,401	1.2	72,710	1.4	97,310	1.8
Oddments	94,268	2.1	81,725	1.7	104,738	2.2	126,142	2.5	136,194	2.5
Grand total	4,549,252	100.0	4,743,054	100.0	4,855,681	100.0	5,117,641	100.0	5,508,672	100.0

(a) All greasy wool sold at auction except 'wool re-offered account buyer'.

### Price and value

During 1969-70 the price of greasy and scoured wool sold in the selling centres of Australia averaged 37.55c per lb compared with the average price of 44.67c per lb in 1968-69 and 41.75c per lb in 1967-68. These prices are as compiled by the National Council of Wool Selling Brokers and represent the average price realised for all greasy and scoured wool, of whatever type or quality, marketed during the years indicated.

Fluctuation in Australian wool prices has a marked effect on the nation's rural and national income. In 1945-46 the gross value of wool production was \$117,194,000, representing 17.4 per cent of the gross value of production of all rural industries, while in 1950-51, when prices reached a peak, wool was valued at \$1,303,804,000 or 55.6 per cent of the total value of production for all rural industries. The value of wool production fluctuated considerably in subsequent years. In 1969-70 it was \$735,233,000, 18.4 per cent of the gross value of production of rural industries.

### ESTIMATED GROSS VALUE OF TOTAL WOOL PRODUCTION(a) STATES AND TERRITORIES, 1965-66 TO 1969-70 (\$'000)

Season	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1965-66	278,295	193,797	90,961	103,635	118,198	22,405	41	1,105	808,437
1966-67	286,293	180,946	93,190	104,588	124,821	20,983	39	1,370	812,230
1967-68	265,527	133,213	94,874	79,925	119,146	15,609	41	1,189	709,524
1968-69	296,005	155,547	108,060	95,054	161,589	21,180	38	1,178	838,651
1969-70	275,385	154,693	69,783	91,224	124,829	18,081	30	1,208	735,233

(a) Includes shorn, dead and fellmongered wool and wool exported on skins.

### Stocks of wool

Stocks of raw wool held in Australia at 30 June 1970 amounted to 356.4 million lb (greasy basis) of which 73.8 million lb (48.4 million lb as greasy and 25.4 million lb as scoured and carbonised) was held by woollen mills, wool scourers and fellmongers, and 282.6 million lb, assumed to be all greasy, was held by brokers. Of the wool held by brokers, 50.8 million lb was unsold wool and 231.8 million lb was sold wool held awaiting shipment. These stocks exclude wool on skins, since this wool is not recorded as production until fellmongered in Australia or exported on skins.

### Consumption of wool

Statistics of raw wool consumption published in recent years for the purposes of broad international comparisons are based on the quantities of scoured or carbonised wool used on the woollen and worsted systems (mill consumption), plus quantities used in such processes as felting. Consumption estimates compiled on this basis have obvious defects, as they disregard overseas trade in semi-processed wool (e.g. tops and yarns) as well as woollen goods. Estimates of raw wool used on the woollen and worsted systems and by felt manufacturers in Australia are shown in the following table for the years 1965-66 to 1969-70.

### ESTIMATED CONSUMPTION OF RAW WOOL: AUSTRALIA, 1965-66 TO 1969-70 ('000 lb)

Year	Greasy basis			Clean equivalent		
	Used on woollen and worsted systems	Used for felt manufacture (including hats)	Total	Used on woollen and worsted systems	Used for felt manufacture (including hats)	Total
1965-66	126,119	1,990	128,109	74,418	945	75,363
1966-67	121,777	2,210	123,987	71,412	1,050	72,462
1967-68	128,401	2,530	130,931	73,043	1,202	74,245
1968-69	130,903	2,530	133,433	74,466	1,202	75,668
1969-70 p	131,083	2,530	133,613	74,568	1,202	75,770

As considerable quantities of tops, noils and yarn are exported from Australia, the series on raw wool consumption shown on page 806 is over-stated to this extent. The series 'Estimated consumption of processed wool in Australia' provides a more reliable indication of wool consumption in Australia, as allowance has been made for exports of wool in semi-processed form. This series is shown in the following table for the years 1965-66 to 1969-70. Briefly, the series measures consumption of wool in terms of yarn used in Australian mills and other factories to produce woollen cloth and other woollen goods, yarn used for hand knitting purposes, and scoured wool used for felt manufacture. No allowance has been made for overseas trade in woollen piece goods, clothing, etc., because of the obvious difficulties of estimating accurately the wool content of these products.

**ESTIMATED CONSUMPTION OF PROCESSED WOOL: AUSTRALIA**  
1965-66 TO 1969-70  
(<sup>'000</sup> lb)

Year	Greasy basis			Total	Clean equivalent			Total
	Worsted yarn used (a)(b)	Woollen yarn used (b)	Scoured wool used for felt manufacture (including hats)		Worsted yarn used (a)(b)	Woollen yarn used (b)	Scoured wool used for felt manufacture (including hats)	
1965-66	43,730	34,107	1,990	79,827	25,391	20,829	945	47,165
1966-67	41,838	38,628	2,210	82,676	24,129	23,499	1,050	48,678
1967-68	40,232	37,197	2,530	79,459	22,411	22,667	1,202	46,280
1968-69	38,801	36,543	2,530	77,874	21,600	22,267	1,202	45,069
1969-70p	40,503	40,047	2,530	83,080	22,581	24,404	1,202	48,187

(a) Includes hand knitting yarns used. fibres.

(b) Includes wool content of yarns containing a mixture of wool and other

**Quantities of wool exported**

Of the total shipments of greasy and slipe wool in 1969-70, 36 per cent went to Japan, 9 per cent to the United Kingdom, 9 per cent to Italy, 8 per cent to France, 6 per cent to the Federal Republic of Germany and 5 per cent to Belgium-Luxembourg.

**EXPORTS OF GREASY AND SLIPE WOOL: AUSTRALIA, 1965-66 TO 1969-70**  
(<sup>'000</sup> lb actual weight)

Country of consignment	1965-66	1966-67	1967-68	1968-69	1969-70
Belgium-Luxembourg	88,802	98,546	95,934	84,557	85,469
France	130,903	106,208	120,641	130,776	133,192
Germany, Federal Republic of	91,006	71,170	100,823	96,880	101,603
India	9,241	29,583	21,562	34,027	42,223
Italy	137,405	151,749	123,116	130,678	135,707
Japan	467,587	492,456	498,087	530,453	569,305
Netherlands	13,165	13,998	15,294	28,960	50,524
Poland	28,441	30,651	35,536	34,460	33,825
United Kingdom	133,696	145,828	143,593	115,856	138,051
United States of America	72,720	55,721	60,165	60,611	46,678
U.S.S.R.	29,542	29,205	46,147	62,018	67,395
Other	121,831	142,786	133,490	161,723	167,414
<b>Total</b>	<b>1,324,339</b>	<b>1,367,901</b>	<b>1,394,388</b>	<b>1,470,999</b>	<b>1,571,386</b>

**EXPORTS OF SCOURED AND WASHED, AND CARBONISED WOOL: AUSTRALIA**  
**1965-66 TO 1969-70**  
('000 lb actual weight)

<i>Country of consignment</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Canada . . . . .	2,925	3,767	5,087	2,203	2,739
China (Taiwan) . . . . .	1,863	1,487	990	1,511	3,185
France . . . . .	2,877	2,920	2,443	2,326	1,358
Germany, Federal Republic of . . . . .	7,531	7,100	8,648	6,773	5,396
Hong Kong . . . . .	2,439	2,816	2,689	4,551	4,348
Iran . . . . .	4,668	4,650	4,729	4,111	4,882
Italy . . . . .	7,928	8,048	8,708	7,434	8,333
Japan . . . . .	5,594	4,215	3,952	3,644	3,703
Korea, Republic of . . . . .	155	1,025	1,823	2,693	2,374
United Kingdom . . . . .	14,521	16,850	18,931	13,509	13,350
United States of America . . . . .	27,671	16,180	18,377	19,061	14,360
U.S.S.R. . . . .	..	2,472	3,675	7,742	15,358
Other . . . . .	10,591	8,340	9,985	9,834	10,944
<b>Total . . . . .</b>	<b>88,763</b>	<b>79,870</b>	<b>90,037</b>	<b>85,392</b>	<b>90,330</b>

**EXPORTS OF CARDED OR COMBED WOOL, NOILS AND WOOLWASTE: AUSTRALIA**  
**1965-66 TO 1969-70**  
('000 lb actual weight)

	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Carded or combed—Tops . . . . .	22,909	23,975	22,617	24,124	21,914
Other . . . . .	175	..	..	6	8
Noils . . . . .	3,734	4,114	3,886	3,386	2,608
Waste—Soft wool . . . . .	2,734	2,585	2,875	2,261	2,230
Hard wool . . . . .	2,891				

The following table shows the estimated greasy weights of exports of raw and semi-processed wool for the years 1965-1966 to 1969-70. As the figures in the following table are in terms of 'greasy' basis, they differ from those in the preceding tables which represent actual weight shipped.

**EXPORTS OF WOOL—GREASY BASIS: AUSTRALIA**  
**1965-66 TO 1969-70**  
('000 lb)

	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70p</i>
<b>GREASY BASIS</b>					
<b>Raw wool—</b>					
Greasy and stipe . . . . .	1,324,763	1,368,237	1,395,405	1,471,764	1,571,846
Scoured and washed and carbonised . . . . .	141,780	128,614	147,119	139,531	147,601
Exported on skins . . . . .	134,968	135,269	140,507	149,332	163,722
<b>Total raw wool . . . . .</b>	<b>1,601,511</b>	<b>1,632,120</b>	<b>1,683,031</b>	<b>1,760,627</b>	<b>1,883,169</b>
<b>Semi-processed wool—</b>					
Tops . . . . .	43,069	44,687	43,877	46,801	42,513
Yarn . . . . .	530	263	240	200	277
<b>Total raw and semi-processed wool . . . . .</b>	<b>1,645,110</b>	<b>1,677,070</b>	<b>1,727,148</b>	<b>1,807,628</b>	<b>1,925,959</b>



**Value of wool exported**

The value of wool (other than wool on sheepskins) exported from Australia during 1969-70 was 19 per cent of the total value of exports of merchandise of Australian origin, while the proportion for the five years ended 1969-70 averaged 25 per cent. The value for the five years ended 1969-70, together with the principal countries to which wool was exported, is shown in the following table.

**VALUE OF WOOL EXPORTS: AUSTRALIA(a), 1965-66 TO 1969-70**  
(\$'000)

Country of consignment	1965-66	1966-67	1967-68	1968-69	1969-70
Belgium-Luxembourg . . . . .	34,059	39,822	32,712	32,709	28,026
France . . . . .	64,990	53,554	49,430	59,991	53,615
Germany, Federal Republic of . . . . .	51,174	40,552	46,517	48,994	48,202
Italy . . . . .	76,630	82,229	60,182	70,127	63,928
Japan . . . . .	259,731	274,321	245,882	263,320	259,766
United Kingdom . . . . .	79,857	85,214	71,846	63,947	62,784
United States of America . . . . .	68,749	50,611	47,058	49,753	36,386
U.S.S.R. . . . .	18,588	20,305	27,368	40,104	43,212
Other . . . . .	131,066	159,843	134,736	166,562	165,124
<b>Total . . . . .</b>	<b>784,844</b>	<b>806,451</b>	<b>715,731</b>	<b>795,507</b>	<b>761,043</b>

(a) Excludes wool exported on sheepskins.

**World sheep numbers and wool production**

The following table shows particulars of the woolled sheep numbers and total production of wool, in terms of greasy, in the principal wool-producing countries of the world, together with estimates of world production of merino, crossbred, and carpet type wool for the latest available years.

In 1969-70 Australia produced 33 per cent of the world total of all types of wool. Other principal wool producers were New Zealand with 12 per cent of the world total, Argentina, 7 per cent, South Africa, 5 per cent, and United States of America, 3 per cent. Production in the U.S.S.R., China, and eastern European countries together amounted to 20 per cent.

Australia's wool clip is predominantly merino. New Zealand and Argentina produce mainly crossbred wool, while the clip of the U.S.S.R. is largely of the carpet type.

**ESTIMATED WORLD WOOLLED SHEEP NUMBERS AND PRODUCTION OF WOOL**  
1967-68 TO 1969-70

(Source for countries other than Australia: Reports published by the Commonwealth Secretariat, London)

Country	Sheep numbers (million)			Wool production (million lb—greasy basis)		
	1967-68	1968-69	1969-70(a)	1967-68	1968-69	1969-70
Australia . . . . .	167	175	180	1,770	1,948	2,036
New Zealand . . . . .	61	60		728	732	740
Argentina . . . . .	44	45		428	397	405
South Africa . . . . .	37	39		304	317	331
United States of America . . . . .	22	21	20	227	214	200
Uruguay . . . . .	23	23		186	181	176
United Kingdom . . . . .	28	27		127	119	114
U.S.S.R., China, Eastern Europe(b) . . . . .	246	248		1,239	1,287	1,235
Other . . . . .	319	321		920	914	912
<b>World total . . . . .</b>	<b>946</b>	<b>958</b>		<b>5,929</b>	<b>6,109</b>	<b>6,149</b>
Type of wool—						
Apparel type—						
Merino . . . . .				2,356	2,491	2,526
Crossbred . . . . .				2,308	2,340	2,338
Carpet type . . . . .				1,269	1,282	1,272

(a) Provisional. (b) This group comprises Albania, Bulgaria, China and Dependencies, Czechoslovakia, East Germany, Hungary, Outer Mongolia, Poland, Romania, Tibet, and U.S.S.R.

**Principal importing countries and sources of supply**

The following table, prepared from information published by the Commonwealth Secretariat, furnishes, in respect of the principal importing countries, details of their imports of wool for 1969 together with the chief sources of supply. The quantities imported refer to the actual weight of wool without distinguishing between greasy and scoured, except in the case of the United States of America, where estimated clean content of wool is quoted.

**PRINCIPAL WOOL IMPORTING COUNTRIES AND SOURCES OF SUPPLY, 1969**

(Source: Information published by the Commonwealth Secretariat, London)

(Million lb)

Importing country	Quantity imported from(a)—					Total imports
	Australia	New Zealand	Argentina	South Africa	Other countries	
Japan . . . . .	550.3	65.2	22.8	43.8	14.1	696.2
United Kingdom . . . .	147.1	148.5	37.5	38.2	146.7	518.0
France . . . . .	160.0	106.4	12.4	57.1	19.7	355.6
Italy . . . . .	130.6	34.3	15.3	25.8	46.2	252.2
Belgium . . . . .	99.0	52.1	11.9	13.0	37.3	213.3
Germany, Federal Republic of	96.9	45.7	13.1	38.2	47.4	241.3
United States of America(b)	50.9	70.3	24.1	11.0	32.6	188.9

(a) Actual weight of greasy and scoured wool. (b) Imports are in terms of estimated clean content of greasy and scoured wool. Actual weight of total United States of America imports was 249.5 million lb.

As a considerable transit trade exists between European countries, it must not be assumed that the whole of the imports recorded by these countries is retained for their own consumption. The countries chiefly concerned with the transit trade are the United Kingdom and Belgium.

**Pastoral products: meat****Australian Meat Board**

The Australian Meat Board, which was re-constituted under the Meat Industry Act 1964-1969, is the body responsible for controlling the external marketing of Australian beef, mutton and lamb. Powers and membership of the Board prior to 1964 are set out on page 801, Year Book No. 40. Following its reconstitution it consisted of five members representing meat producers, two representing meat exporters, one representing the Commonwealth Government, and an independent Chairman. The Meat Industry Act was amended in 1969 to provide for the appointment of an additional member to represent meat producers. The Board's primary function is to ensure that Australian meat exports are marketed in a manner which will safeguard the long-term interests of the Australian meat industry.

The Board regulates overseas marketing of Australian meat by means of an export licensing system. It has power of control over the kinds of meat that may be exported by licensed exporters to particular places, or to particular agents and representatives. The Board also has power to undertake measures to promote the sale and consumption of meat both in Australia and overseas, and it may purchase and sell meat in its own right for the purpose of market development. However, the exercise of this power is limited to activities aimed at meeting special marketing problems or circumstances which preclude the effective participation of private traders. The Board may also purchase and sell meat, with the approval of the Minister for Primary Industry, for the purpose of administering any international arrangements to which Australia may be a party.

**Meat research schemes**

In November 1965 the Commonwealth Parliament passed legislation providing for the extension of the cattle and beef research scheme to cover beef, mutton and lamb research. Details of the beef research scheme were set out on page 1050, Year Book No. 51. Under the new legislation the Cattle and Beef Research Committee was re-constituted as the Meat Research Committee, its powers and functions being similar to those of the former Committee extended to include mutton and lamb research. The Meat Research Committee consists of twelve members—seven meat producer representatives, the Chairman of the Australian Meat Board (Chairman), one representative from the universities engaged in meat research, the Commonwealth Scientific and Industrial Research

Organization, the Australian Agricultural Council, and the Department of Primary Industry. The new Committee came into being in March 1966 and the Cattle and Beef Research Committee ceased to exist from that date.

The scheme is financed from the Livestock Slaughter Levy (*see below*). The Commonwealth makes a matching contribution on a \$1 for \$1 basis to meet expenditure on research. The research is conducted by such bodies as the universities, C.S.I.R.O., State Departments of Agriculture and the Bureau of Agricultural Economics.

The Minister for Primary Industry approved a beef research programme of \$2,154,000, and a mutton and lamb research programme of \$1,127,000 for 1970-71.

### **The Livestock Slaughter Levy**

The *Livestock Slaughter Levy Act* 1964-1966 imposed a levy on all cattle (over 200 lb dressed weight), sheep and lambs slaughtered within Australia for human consumption. These levies operated from 1 August 1964 and have replaced the charge imposed on meat exports and also subsumed the cattle levy for beef research purposes imposed in 1960 (*see* page 909, Year Book No. 51). In November 1968 legislation was passed amending the Act to provide for an additional levy to finance service and investigation activities relating to meat processing. The amended legislation (the *Livestock Slaughter Levy Act* 1964-68) now provides three elements in the levy for each class of livestock—an amount to finance meat research; an amount to finance the operations of the Australian Meat Board; and, from 1 January 1969 until 31 December 1971, an amount to finance service and investigation activities relating to meat processing. The first two elements are paid by producers while the third element is paid by meat processors.

Under the Act the total levy may not exceed 75.0c a head for cattle or 7.5c a head for sheep and lambs. The amount levied for research may not exceed 25.0c a head for cattle or 3.3c a head for sheep and lambs while the amount for service and investigation activities relating to meat processing is set for the period of its operation at 1.0c a head for cattle and 0.1c a head for sheep and lambs. The present operative rate for cattle is 46.0c (25.0c for research; 20.0c to the Australian Meat Board; 1.0c for service and investigation) and for sheep and lambs, 3.85c (1.75c for research; 2.00c to the Australian Meat Board; 0.10c for service and investigation).

### **United Kingdom long-term purchase arrangements**

Details of the long-term meat contracts with the United Kingdom from 1939 to 1952 and of the Fifteen Year Meat Agreement (1952-67) are given on page 710, Year Book No. 41 and in earlier issues. In September 1953 the trade in meat between the United Kingdom and Australia reverted to private traders. The main features of the arrangements were given in Year Book No. 47, page 960. Details of minimum prices operating and deficiency payments received in recent years under private trading appear in Year Book No. 48 (page 973) and No. 50 (page 1068).

On 30 September 1967 the Fifteen Year Meat Agreement expired, and no new agreement has been negotiated. However, Australia still retains guaranteed duty-free entry for meat and a number of tariff preferences in the United Kingdom market under the provisions of the United Kingdom-Australia Trade Agreement.

### **Lamb Guarantee Scheme**

Since the 1962-63 lamb export season the Australian Meat Board has guaranteed exporters a minimum price on all lambs 36 lb and under shipped to the United Kingdom. For the 1966-67 season the prices were set at 16.0c per lb and 14.5c per lb, and for 1967-68 and 1968-69, 17.0c per lb and 15.5c per lb. Prices set for the 1969-70 and 1970-71 seasons were 18.0c per lb and 16.5c per lb. The higher guaranteed price for the initial period is aimed at stimulating early shipments of lamb, because normally the most opportune time for selling Australian lamb in the United Kingdom market is early in the export season. Any commitment by the Board is payable from funds received, in respect of lamb under the Fifteen Year Meat Agreement.

### **United States-Australia Meat Agreement**

In February 1964 the Governments of Australia and the United States concluded an agreement for the regulation of beef, veal and mutton exports from Australia to the United States with the object of promoting the orderly development of the trade in these classes of meat between the two countries. (Details of the Agreement were given on page 820 of Year Book No. 56). In June, 1970 the United States advised that it was terminating the Agreement at the end of 1970. Legislation enacted by the United States Congress in 1964, details of which were given in previous issues of the Year Book, provides for restrictions on imports of fresh, chilled and frozen beef, veal, mutton and goatmeat from all sources if such imports are estimated by the United States Secretary of Agriculture to exceed a predetermined figure (the trigger point) calculated by a formula in the legislation. Should



quotas be necessary the total permissible imports would be set some 10 per cent below the trigger point. Until 1968 the estimate of imports did not exceed the trigger point and quotas were not necessary. However, late in that year it appeared likely that quotas would be triggered and to avoid this all major suppliers agreed to restrain shipments. The total restraint level was set approximately half way between the quota level and trigger point. A similar situation arose in 1969 and 1970 and restraints again operated. However in June, 1970 the estimate of imports exceeded the trigger point and the United States President suspended the operation of quotas and announced new higher restraint levels for all major suppliers. In 1971 an increase of 41.2 per cent (37.7 per cent in 1970) in the base quantity was set providing for allowable imports of approximately 457,400 tons (445,900 tons in 1970) and a trigger point of 503,100 tons (490,500 tons in 1970). However the initial estimate of imports was 517,900 tons. While this was in excess of the trigger point quotas were not imposed as the United States President exercised, as in 1970, his powers under the legislation and announced that the operation of quotas would be suspended as suppliers had agreed to enter into a restraint agreement with the United States to keep the import level to 517,900 tons.

### Cattle slaughtered

#### CATTLE (INCLUDING CALVES) SLAUGHTERED: STATES AND TERRITORIES 1965-66 TO 1969-70 (<sup>'000</sup>)

Year	Slaughtering passed for human consumption								Total slaughterings including boiled down
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	
1965-66	1,780	1,829	1,888	277	315	154	69	11	6,323
1966-67	1,455	1,706	1,677	265	301	170	67	10	5,650
1967-68	1,447	1,713	1,664	245	333	172	74	10	5,656
1968-69	1,417	1,514	1,823	220	366	178	80	10	5,608
1969-70	1,545	1,709	1,680	249	402	178	83	15	5,861

### Production of beef and veal

#### PRODUCTION OF BEEF AND VEAL (CARCASS WEIGHT): STATES AND TERRITORIES 1965-66 TO 1969-70 (Tons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1965-66	244,527	238,904	313,747	36,513	58,089	23,011	14,798	1,795	931,384
1966-67	209,403	224,983	295,810	38,754	54,811	24,695	14,572	1,711	864,739
1967-68	220,879	223,307	310,478	33,074	59,249	25,084	15,879	1,692	889,642
1968-69	217,011	212,859	340,744	35,617	67,751	27,936	16,239	1,891	920,048
1969-70	273,358	249,574	309,771	40,059	71,902	31,011	16,147	2,636	994,458

### Consumption of beef and veal

The highest post-war consumption of beef and veal (including canned beef and veal) was 132.7 lb per head in 1956-57. With the buoyant overseas market for beef and the high prices ruling in Australia during the following four years, consumption per head fell substantially, and in 1960-61 amounted to only 88.3 lb. In 1969-70 consumption per head was 89.2 lb, of which 85.2 lb was carcass meat and 3.9 lb was canned meat (in terms of carcass equivalent).

#### PRODUCTION AND DISPOSAL OF BEEF AND VEAL (CARCASS WEIGHT) AUSTRALIA, 1965-66 TO 1969-70

Year	Net change in stocks	Pro- duction	Exports (a)	For canning	Apparent consumption in Australia	
					Total	Per head per year
	<sup>'000 tons</sup>	<sup>'000 tons</sup>	<sup>'000 tons</sup>	<sup>'000 tons</sup>	<sup>'000 tons</sup>	lb
1965-66	..	931	412	44	476	92.6
1966-67	— 5	865	384	40	445	85.2
1967-68	— 6	890	381	38	478	89.7
1968-69	+12	920	380	34	495	91.1
1969-70	+5	994	481	35	473	85.2

(a) Includes carcass equivalent of boneless beef exported and all fresh and frozen meat shipped as ships' stores.



**Exports of beef and veal**

While beef and veal were previously shipped largely in carcass form, there has been in recent years a substantial increase in the amount of boneless beef exported. From 1958-59 to 1969-70 the quantity of boneless beef shipped exceeded that exported in carcass form. The trade in boneless beef has been developed principally with the United States of America. In 1969-70, the principal markets for Australian beef and veal exports were the United States (517,640,000 lb, valued at \$225,485,000); United Kingdom (59,781,000 lb, valued at \$15,713,000); and Canada (51,688,000 lb, valued at \$19,717,000).

**EXPORTS OF FROZEN AND CHILLED BEEF AND VEAL(a): AUSTRALIA  
1965-66 TO 1969-70**

Year	Exports of frozen and chilled beef		Exports of frozen veal		Exports of frozen and chilled beef and frozen veal	
	Quantity	Value	Quantity	Value	Quantity	Value
	'000 lb	\$'000	'000 lb	\$'000	'000 lb	\$'000
		f.o.b.		f.o.b.		f.o.b.
1965-66	593,350	189,762	19,260	5,714	612,610	195,477
1966-67	562,330	192,321	15,889	5,922	578,219	198,243
1967-68	554,423	194,524	9,645	4,064	564,068	198,588
1968-69	555,986	207,292	8,389	3,681	564,375	210,973
1969-70	711,092	286,926	11,804	5,200	722,896	292,126

(a) Actual weight shipped, not carcass equivalent.

**Sheep slaughtered**

**SHEEP (INCLUDING LAMBS) SLAUGHTERED: STATES AND TERRITORIES  
1965-66 TO 1969-70  
('000)**

Year	Slaughtering passed for human consumption								Total slaughtering including boiled down
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	
1965-66	11,192	13,332	2,769	3,474	2,535	1,164	2	92	34,560
1966-67	9,989	13,160	2,154	3,358	2,580	1,159	2	93	32,496
1967-68	12,099	14,999	2,491	4,019	3,173	1,125	..	103	38,008
1968-69	12,950	12,882	2,724	2,977	3,808	1,241	..	130	36,712
1969-70	13,309	15,745	2,937	4,232	4,534	1,297	..	158	42,213

**Production of mutton and lamb**

**PRODUCTION OF MUTTON AND LAMB (CARCASS WEIGHT)  
STATES AND TERRITORIES, 1965-66 TO 1969-70  
(Tons)**

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1965-66	184,523	240,697	45,515	60,738	44,695	21,097	46	1,517	598,828
1966-67	173,857	243,597	37,744	62,476	46,381	20,902	45	1,621	586,623
1967-68	203,169	261,615	43,801	68,730	55,059	19,845	9	1,795	654,023
1968-69	223,945	247,972	48,208	56,824	67,713	22,452	1	2,240	669,355
1969-70	233,501	277,710	50,711	78,172	76,814	23,669	2	2,482	743,061

**Consumption of mutton and lamb**

In 1959-60 consumption of mutton and lamb, at 103 lb per head of population, exceeded that of beef and veal for the first time on record. Subsequently, it showed a continuous decline until 1965-66, when it fell to 82.8 lb per head. The 1969-70 figure was 82.7 lb per head or 2.5 lb per head less than beef and veal. This was the lowest since 1957-58 when it was 79.1 lb per head.

# PRODUCTION OF MEAT: AUSTRALIA

1921-22 TO 1969-70

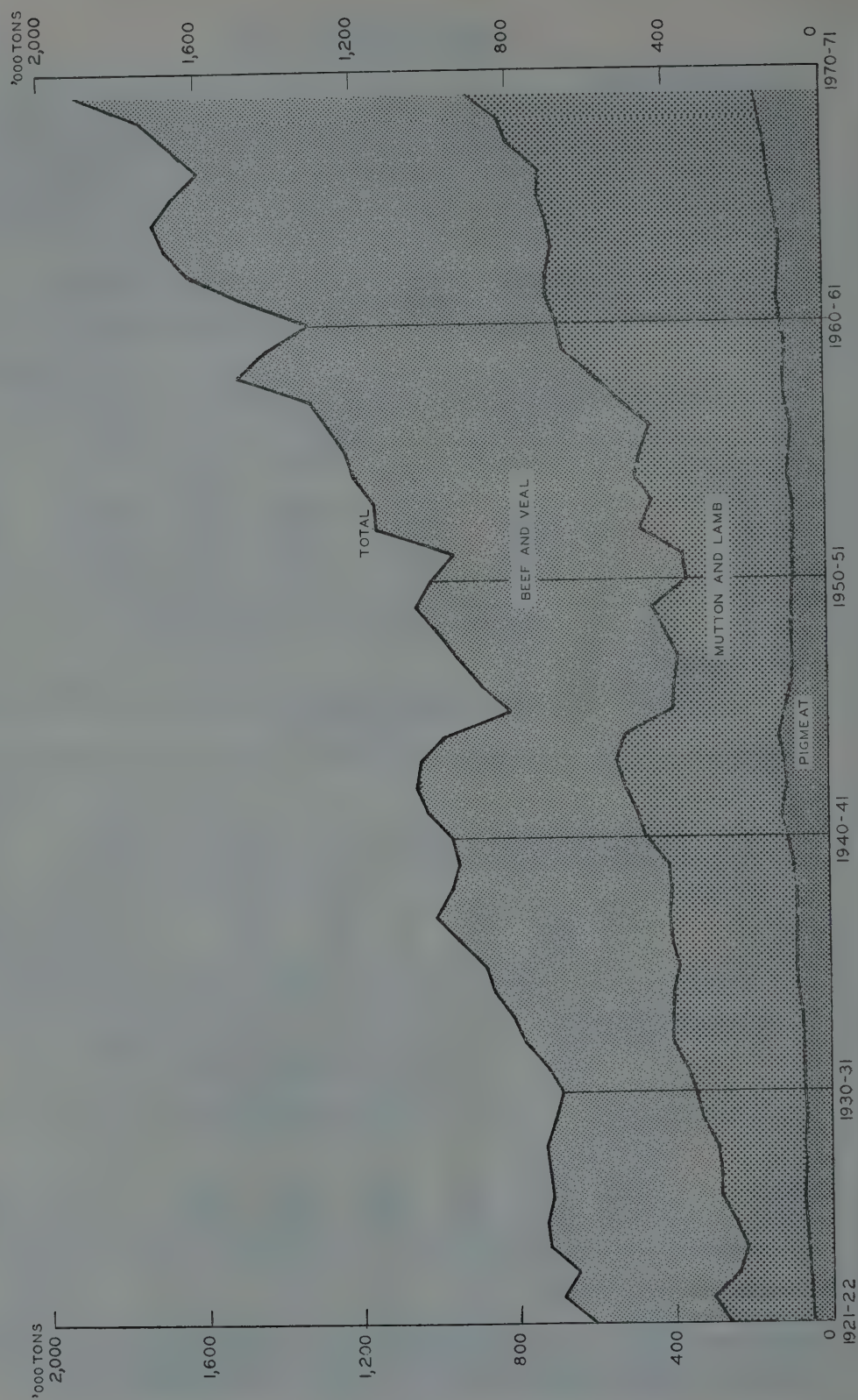


PLATE 43

**PRODUCTION AND DISPOSAL OF MUTTON AND LAMB  
(CARCASS WEIGHT): AUSTRALIA, 1965-66 TO 1969-70**

Year			Net change in stocks ( <sup>'000</sup> tons)	Pro- duction ( <sup>'000</sup> tons)	Exports (a) ( <sup>'000</sup> tons)	For canning ( <sup>'000</sup> tons)	Apparent consumption in Australia	
							Total ( <sup>'000</sup> tons)	Per head per year (lb)
MUTTON								
1965-66	.	.	+4	390	141	9	236	46.0
1966-67	.	.	-5	350	132	7	216	41.3
1967-68	.	.	+3	412	180	8	222	41.7
1968-69	.	.	+2	366	129	7	229	42.1
1969-70	.	.	+1	434	218	7	207	37.3
LAMB								
1965-66	.	.	+3	209	18	..	189	36.8
1966-67	.	.	-3	237	18	..	222	42.5
1967-68	.	.	..	242	11	..	230	43.2
1968-69	.	.	+1	303	43	..	259	47.7
1969-70	.	.	-1	309	57	..	252	45.4

(a) Includes carcass equivalent of boneless mutton exported.

**Exports of frozen mutton and lamb**

**EXPORTS OF FROZEN MUTTON AND LAMB(a): AUSTRALIA, 1965-66 TO 1969-70**

Year	Exports of frozen mutton		Exports of frozen lamb		Exports of frozen mutton and lamb	
	Quantity	Value	Quantity	Value	Quantity	Value
	<sup>'000</sup> lb	<sup>\$'000</sup> f.o.b.	<sup>'000</sup> lb	<sup>\$'000</sup> f.o.b.	<sup>'000</sup> lb	<sup>\$'000</sup> f.o.b.
1965-66	176,424	37,242	35,574	8,176	211,998	45,417
1966-67	177,359	35,339	33,161	7,979	210,520	43,318
1967-68	232,317	44,141	20,336	5,546	252,653	49,687
1968-69	167,564	32,213	65,004	13,216	232,568	45,429
1969-70	300,908	60,912	91,289	20,470	392,197	81,382

(a) Actual weight shipped, not carcass equivalent.

In 1969-70 the principal buyers of Australian frozen mutton and lamb were the United States of America (76,353,000lb, valued at \$21,697,000); Canada (85,910,000lb, valued at \$19,787,000); Japan (100,150,000 lb, valued at \$15,723,000); and the United Kingdom (62,919,000 lb, valued at \$11,885,000).

**Consumption of meat and meat products**

The apparent consumption of meat (including cured and canned meat) and edible offal per head of population in Australia is shown in the table below for the years 1965-66 to 1969-70.

**MEAT (INCLUDING CURED AND CANNED) AND EDIBLE OFFAL  
AVAILABLE FOR CONSUMPTION: AUSTRALIA, 1965-66 TO 1969-70**

(lb per head per year)

Year	Beef and veal(a)	Mutton (a)	Lamb(a)	Pork(a)	Offal	Canned meat(b)	Bacon and ham(c)	Carcass equivalent of meat and meat products (d)
1965-66	92.6	46.0	36.8	13.3	11.5	4.5	7.6	216.4
1966-67	85.2	41.3	42.5	13.4	11.0	5.2	8.1	210.3
1967-68	89.7	41.7	43.2	14.6	11.4	4.8	7.7	217.4
1968-69	91.1	42.1	47.7	16.1	11.2	4.9	7.8	225.1
1969-70	85.2	37.3	45.4	16.6	11.4	5.1	8.3	213.8

(a) Carcass weight. (b) Canned weight. (c) Cured carcass weight. (d) Includes offal.

### Other pastoral products

#### Tallow

Details of tallow consumption are collected from the principal factories using tallow. Recorded usage of inedible tallow in factories classified to industry sub-classes industrial and heavy chemicals and acids, and soap and candles, for the five years 1963-64 to 1967-68 was as follows: 1963-64, 1,077,000 cwt; 1964-65, 1,157,000 cwt; 1965-66, 1,061,000 cwt; 1966-67, 1,007,000 cwt; 1967-68, 880,000 cwt. Details for 1968-69 and 1969-70 are not yet available. These figures are, however deficient to the extent that no allowance has been made for small unrecorded amounts used in other types of establishments. Details of edible tallow consumed in factories are not available.

Particulars of exports of edible and inedible tallow of Australian origin are shown in the following table for five years 1965-66 to 1969-70.

**TALLOW: EXPORTS, AUSTRALIA, 1965-66 TO 1969-70**  
(cwt)

	1965-66	1966-67	1967-68	1968-69	1969-70
Edible . . .	51,869	244,582	88,465	201,847	348,005
Inedible . . .	1,243,684	1,767,130	1,654,071	2,035,529	3,019,497
<b>Total . . .</b>	<b>1,295,553</b>	<b>2,011,712</b>	<b>1,742,536</b>	<b>2,237,376</b>	<b>3,367,502</b>

#### Overseas trade in hides and skins

The value of cattle and horse hides, sheep and other skins, and skin pieces sent overseas during 1969-70 amounted to \$89,335,000, compared with a total of \$76,855,000 in 1968-69 and \$63,731,000 in 1967-68.

Of the total exports of sheepskins with wool during 1969-70, amounting to 244,921,000 lb valued at \$63,200,000, 145,068,000 lb valued at \$35,148,000 (56 per cent of total value) were shipped to France, 50,021,000 lb valued at \$15,090,000 (24 per cent) to Italy, and 14,696,000 lb valued at \$3,665,000 (6 per cent) to the Federal Republic of Germany. In the previous year France received 60 per cent (by value) of all sheepskins with wool exported, Italy 22 per cent and the Federal Republic of Germany 3 per cent. The exports of sheepskins with wool during each of the years 1965-66 to 1969-70 were as follows.

**EXPORTS OF SHEEPSKINS WITH WOOL: AUSTRALIA**  
1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
Number . . . '000	28,952	27,578	29,757	30,473	34,109
Value . . . \$'000	63,042	62,074	45,620	55,784	63,200



In 1969-70 a total of 1,441,000 sheepskins without wool were exported, valued at \$880,000. Of these, sheepskins without wool to the value of \$231,000 (26 per cent) were shipped to Italy, \$193,000 (22 per cent) to the United States of America and \$103,000 (12 per cent) to France.

The export trade in cattle hides and calfskins during 1969-70 was distributed among the main importing countries as follows: Japan, \$10,750,000, the Federal Republic of Germany, \$2,333,000, and Italy, \$1,332,000. The total quantity exported was 142,419,000 lb, valued at \$21,802,000.

The exports of furred skins in 1969-70 were valued at \$2,459,000, of which kangaroo and wallaby skins constituted \$1,568,000 and rabbit and hare skins \$619,000. In 1968-69 they accounted for \$1,209,000 and \$547,000 respectively, out of a total of \$1,937,000. The skins were shipped principally to the United States of America, the United Kingdom, the Federal Republic of Germany and Italy; the values shipped to each in 1969-70 being \$1,340,000, \$330,000, \$315,000 and \$279,000 respectively.

The quantity of cattle hides, including calfskins, imported into Australia during the year 1969-70 amounted to 503,000 lb, valued at \$91,000. The chief source of supply was New Zealand.

## OTHER RURAL INDUSTRIES: DAIRYING, PIG, POULTRY AND BEE-FARMING

### The dairying industry

The introduction of cattle into Australia and the early history of the dairying industry are treated in some detail in earlier issues of the Year Book. Australian dairy cattle have shown steady improvement in quality, as demonstrated by yield, over the years. This is attributable to improved breeding, associated with herd recording, better feeding, resulting from the use of improved pastures and better farming methods, arising from the development of modern farm machinery and the application of the results of research.

The Australian dairying industry is conducted under conditions ranging from tropical to temperate and Mediterranean type climates, and in general, is confined to the coastal and near coastal regions where rainfall and topography are favourable. These conditions are found in parts of the eastern, southern and south-western coasts. Inland districts include the lower north-east of Victoria, the south-western slopes of New South Wales, the fertile Darling Downs in Queensland, and the irrigated districts of the Riverina in New South Wales and northern Victoria.

The manufacturing and processing sections of the industry are well advanced technologically and certain techniques and equipment developed in Australia are now being adopted overseas. State Agricultural Departments give advice on approved methods of production and inspect animals, buildings and marketable produce, to ensure that the latest advances in technology are passed on to the farmer and that hygiene standards are maintained at a high level.

### Marketing of dairy products

The export trade is regulated by the terms of the *Commonwealth Customs Act* 1901-1968 and the *Commonwealth Commerce (Trade Descriptions) Act* 1905-1966 and regulations thereunder. This legislation requires that the true trade descriptions, etc., be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are given a certificate by the inspector.

Details of the *Dairy Produce Export Control Act* 1924-1966 and of the Australian Dairy Produce Board constituted under it were given in earlier issues of the Year Book (see No. 48, pages 999-1000). The administrative expenses of the Australian Dairy Produce Board and other sundry expenditure were met from the proceeds of a levy imposed by the *Dairy Produce Export Charges Act* 1964 (see Year Book No. 51, page 1070). In 1965 this Act, together with the *Dairy Produce Levy Act* 1958, was replaced by the *Butterfat Levy Act* 1965-1966 (see page 819).

### Equalisation schemes

Reference is made to the butter and cheese equalisation schemes in Year Book No. 48, pages 998-9. Particulars of the returns realised on local and overseas sales and of the average equalisation rate for the years ended June 1965 to 1970 are given on page 826 of this issue. Details are also given on page 825 of the wholesale prices of butter and cheese for home consumption as determined by the Commonwealth Dairy Produce Equalisation Committee Ltd.

An equalisation scheme for casein similar to that for butter and cheese has been operated since 1952 by the Commonwealth Dairy Produce Equalisation Committee Ltd. Average realisations per cwt under the scheme were \$17.381 in 1964-65, \$24.918 in 1965-66, \$23.556 in 1966-67, 24.606 in 1967-68. For 1968-69, the interim rate is \$24.60, for 1969-70 \$24.50, and for 1970-71 \$20.00.

At the request of skim milk powder manufacturers a Deed of Agreement was signed by manufacturers in New South Wales, Victoria, South Australia and Tasmania for an equalisation scheme commencing with disposals of skim milk powder ex manufacture on and from 1 July 1970.

Statutory support for the equalisation scheme was provided by legislation passed by Parliament during 1970 and ratified by producers at a referendum held in February 1971. The legislation consists of *The Dairying Industry Equalisation Act 1970*, *The Dairying Industry Levy Act 1970*, and *The Dairying Industry Levy Collection Act 1970*.

The basic element of the legislation is the establishment of a fund by way of a levy on the production of butter, butteroil, cheese, casein and such other dairy produce as may be prescribed to provide the necessary finance for equalisation payments. The legislation has been designed to permit the imposition of the levy on one product or a number of products as circumstances warrant. It will not be implemented unless there is a specific need created such as by the withdrawal of an important manufacturer from the present voluntary equalisation scheme.

### Commonwealth bounties and stabilisation plans

*Butter and cheese.* Under the provisions of the various Dairy Industry Assistance Acts, the first of which was passed in 1942, the Commonwealth Government has provided bounties on milk supplied for the manufacture of butter and cheese. Bounties were paid on a seasonal basis prior to 1 April 1946, but from that date have been on a flat rate basis. Bounties are distributed by the Commonwealth Dairy Produce Equalisation Committee Ltd, through factories, to milk producers by payments on butter and cheese manufactured. Details of the three five-year stabilisation plans which operated up to 30 June 1962, will be found in Year Book No. 49, page 1084. Information regarding the plan which operated during the five years ended 30 June 1967 appears in Year Book No. 52, page 961.

A new five-year stabilisation plan came into operation on 1 July 1967. All the features of the previous plan were retained, including the fixed bounty of \$27,000,000 payable in each year of the plan on butter, cheese and butterfat products containing 40 per cent or more butterfat.

The underwriting of final minimum equalised returns on butter and cheese, each year, was also continued. Returns to producers which had been underwritten at 33c per lb on commercial butter each year since the inception of the underwriting arrangement in 1958 were raised to 34c per lb for the 1967-68 season and maintained at that level for 1968-69 and 1969-70.

However these arrangements were altered for the year 1970-71 as the Government's commitments on underwriting relating to total production were no longer appropriate to the changing market situation. Instead of the underwriting arrangements for butter and cheese the Government decided that a grant of \$15,882,000 would be made to the industry for distribution as bounty on the 1970-71 production of butter and cheese under the Dairying Industry Act additional to the existing bounty of \$27,000,000. This \$42,882,000 was the amount estimated necessary to maintain producer returns at 34c per lb commercial butter equivalent if production was held at 220,000 tons for butter and 70,000 tons for cheese.

The Government also agreed that a grant of \$3,379,000 be made to the industry as bounty on 1970-71 exports of skim milk powder, casein and other non-fat products.

Amounts realised on exports of butter and cheese were, in 1948-49 and 1949-50, in excess of the f.o.b. equivalent of the then guaranteed return and were credited to the Dairying Industry Stabilisation Fund, which was established in July 1948 for the purpose of stabilising returns from exports. During 1951-52 the Stabilisation Fund met the deficiency in respect of all exports which did not earn sufficient to meet the basic return to the factory. From 1 July 1952 to 30 June 1957 it was available to the industry to be used, in whatever manner it considered desirable, to make good any deficiency in respect of all exports other than the 20 per cent provided for under the Commonwealth Government's Five-year Stabilisation Plan. The Act was amended in 1957 to enable the Board to use the fund for such other purposes as are approved by the Minister for Primary Industry, and this amendment was later extended by the *Dairying Industry Act 1967* to the present time. The balance of accumulated funds in the Dairying Industry Stabilisation Fund at 30 June 1970 totalled approximately \$5,419,000. The major portion of the fund represents capital and other investments in milk recombining plants now established or under construction by the Board in Bangkok, Cambodia, Djakarta and Manila.

*Processed milk products.* Bounty on milk supplied for the manufacture of processed milk products was also payable from 1942 until 30 June 1948, and again from 1 July 1949 to 30 June 1952. The Commonwealth Government provided, under the *Processed Milk Products Bounty Act 1968*, for the payment of a maximum amount of \$800,000 as a bounty on exports of processed milk products in 1967-68. The bounty is to continue under present legislation until 30 June 1972, the maximum amount available being \$800,000 per annum.

*Whole milk.* In addition to the bounties referred to above, the Commonwealth Government subsidised the production of whole milk consumed directly from 1943-44 to 1948-49. Details of the amounts distributed during each year will be found in Year Book No. 38, page 1031.

#### Extension, research and promotion of the dairying industry

*Dairy Industry Extension Grant.* An annual grant of \$500,000, to be expended by State Governments for the purpose of promoting improved farming practices in the dairying industry, was first made by the Commonwealth Government for the five years from 1 July 1948. The grant was renewed at the same level until 30 June 1963 when it was increased to \$700,000 per annum. On 1 July 1966 the Dairy Industry Extension Grant was incorporated in the Commonwealth Extension Services Grant, and assistance to the State agricultural departments for extension services to the dairying industry will be maintained from funds from this source.

*Dairy industry research and sales promotion.* At the request of the Australian Dairy Industry Council, legislation was enacted in 1958 to provide for a sales promotion campaign for butter and cheese in Australia and also for research into industry problems. The legislation provided for a statutory levy on the manufacture of butter and cheese (the Dairy Produce Levy) which was initially set at rates of 0.104c per lb for butter and 0.052c per lb for cheese, the proceeds being divided equally between research and sales promotion. The rates of levy operative from November 1959 were 0.156c per lb for butter and 0.078c per lb for cheese, of which two-thirds was allocated to sales promotion and one-third to research.

In August 1964 the legislation was amended to include butter powder, at the same rates as for butter, and butteroil and ghee at 0.065c per lb for research and 0.130c per lb for sales promotion. In 1965 the Dairy Produce Levy Act was repealed and replaced by the *Butterfat Levy Act 1965-1966* which provides for the amalgamation of the three levies into one levy on butterfat used in the manufacture of butter, cheese and related products. The maximum rate of levy in the Act is 60 cents per cwt of butterfat, and the prescribed rate operative from 1 September 1970 is 57 cents per cwt (24 cents for promotion, 23 cents for administration and overseas market development, and 10 cents for research).

The Commonwealth Government agreed to contribute one half of the costs incurred on approved projects included in the programme of research, with a maximum contribution of \$1 for \$1 against funds raised by way of levy and allocated to research. The sales promotion programme is financed solely by the levy. The following table lists the amounts of levies collected for research and sales promotion during the five years 1965-66 to 1969-70.

#### BUTTERFAT LEVY: AMOUNTS COLLECTED FOR RESEARCH AND SALES PROMOTION, 1965-66 TO 1969-70

(\$)

	1965-66	1966-67	1967-68	1968-69	1969-70
Research(a) . . .	310,200	406,100	363,700	367,720	413,277
Sales promotion . . .	823,600	891,400	804,300	811,860	908,521
<b>Total collected(a)</b>	<b>1,133,800</b>	<b>1,297,500</b>	<b>1,168,000</b>	<b>1,179,580</b>	<b>1,321,798</b>

(a) Excludes amounts contributed by the Commonwealth Government.

The scheme is administered by the Australian Dairy Produce Board, which, in respect of research, is advised by a statutory committee, the Dairy Produce Research Committee.



## Cattle for milk production

## DAIRY BREED BULLS, AND COWS AND HEIFERS USED OR INTENDED FOR PRODUCTION OF MILK OR CREAM, 31 MARCH 1966 TO 1970

At 31 March	Cows and heifers used or intended for production of milk or cream for sale				House Cows and heifers(c)
	Bulls dairy breed(a)	Cows (in milk and dry)	Heifers One year and over(b)	Under one year	
1970—					
New South Wales . . . . .	13,275	568,440	141,002	107,323	80,917
Victoria . . . . .	33,678	1,245,241	321,533	335,034	25,385
Queensland . . . . .	11,367	459,797	122,300	78,487	31,735
South Australia . . . . .	5,375	142,419	43,005	37,315	6,303
Western Australia . . . . .	2,666	101,094	36,530	33,202	6,842
Tasmania . . . . .	2,833	155,040	37,919	39,578	4,646
Northern Territory . . . . .	71	323	508	257	155
Australian Capital Territory . . . . .	32	1,004	185	187	322
Australia . . . . .	69,297	2,673,358	702,982	631,383	156,305
1969 . . . . .	76,651	2,700,635	768,781	624,290	164,548
1968 . . . . .	81,512	2,793,650	754,587	689,038	169,384
1967 . . . . .	87,235	2,880,681	795,771	671,957	179,675
1966 . . . . .	90,009	2,908,372	822,887	681,033	185,589

(a) Used or intended for service; excludes bull calves (under 1 year). (b) Springing (within 3 months of calving) and other. (c) Kept primarily for rural holdings' own milk supply.

For particulars relating to dairy cattle numbers up to 1963 see page 1078, Year Book No. 50.

A map showing the distribution of dairy cattle in Australia at 31 March 1963 appears facing page 1082, Year Book No. 50.

## Milking machines

MILKING MACHINES ON RURAL HOLDINGS: NUMBER OF UNITS(a)  
STATES AND TERRITORIES, 1966 TO 1970

At 31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1966 . . . . .	41,796	105,003	42,199	18,833	9,780	15,894	26	94	233,625
1967 . . . . .	41,433	108,664	40,878	18,143	9,664	16,414	35	94	235,325
1968 . . . . .	40,862	109,137	38,208	18,399	9,317	16,968	40	91	233,022
1969 . . . . .	39,557	112,618	35,401	17,908	9,036	17,057	24	97	231,698
1970 . . . . .	38,013	112,160	34,185	17,642	9,144	16,941	30	75	228,190

(a) The number of units indicates the number of cows that can be milked simultaneously, i.e. the cow capacity of installed milking machines.

## Production of milk

The quantity of milk produced by a dairy cow can be as high as 1,000 gallons a year, and varies greatly with breed, locality and season. For all dairy cows and for all seasons for Australia prior to 1916 production averaged considerably less than 300 gallons per annum. Largely owing to an improvement in the quality of the cattle and the increased application of scientific methods the 300 gallon average has been exceeded in each year since 1924. In the last five years an average of 522 gallons per cow per annum has been obtained. In 1969-70 the average yield was 583 gallons. The annual average yields per cow shown in the following table are obtained by dividing the total production of whole milk for the year ended June by the mean of the number of cows in milk and dry and house cows at 31 March of that year and of the preceding year. They are, in effect, based on



the approximate number of cows which were in milk during any part of the year. The average shown is, therefore, less than that for cows which were yielding during the greater part of the year, but it may be accepted as sufficiently reliable to show the general trend.

**AVERAGE MILK PRODUCTION PER COW: STATES AND TERRITORIES**  
**1965-66 TO 1969-70**  
 (Gallons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1965-66 . . .	378	616	316	602	508	578	234	524	483
1966-67 . . .	423	647	366	624	480	591	268	548	521
1967-68 . . .	416	596	354	590	502	581	232	465	497
1968-69 . . .	393	663	306	708	546	647	203	486	525
1969-70 . . .	462	712	371	724	543	650	316	598	583

In the following table particulars of the production of whole milk in the various States and Territories are shown for the years 1965-66 to 1969-70. In 1969-70, the production of whole milk in Australia reached a record level of 1,661 million gallons, which is 3.4 per cent more than the previous record attained in 1966-67. Victoria is the principal milk-producing State, and in 1969-70 the output from that State, 892 million gallons, represented 54 per cent of total production. Output from New South Wales in 1969-70 was 310 million gallons (19 per cent of the total) and that of Queensland 191 million gallons (11 per cent). Production in the remaining States and Territories accounted for 16 per cent.

**TOTAL PRODUCTION OF WHOLE MILK: STATES AND TERRITORIES**  
**1965-66 TO 1969-70**  
 ('000 gallons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1965-66 . . .	300,740	750,915	221,086	98,398	61,865	87,890	92	1,026	1,522,013
1966-67 . . .	322,995	796,673	238,134	98,727	55,611	91,418	97	1,070	1,604,725
1967-68 . . .	310,056	734,203	217,202	88,822	55,411	90,793	97	900	1,497,484
1968-69 . . .	278,930	815,791	171,686	102,808	58,222	102,164	97	898	1,530,597
1969-70 . . .	310,876	892,378	191,401	106,236	55,873	103,213	97	939	1,661,013

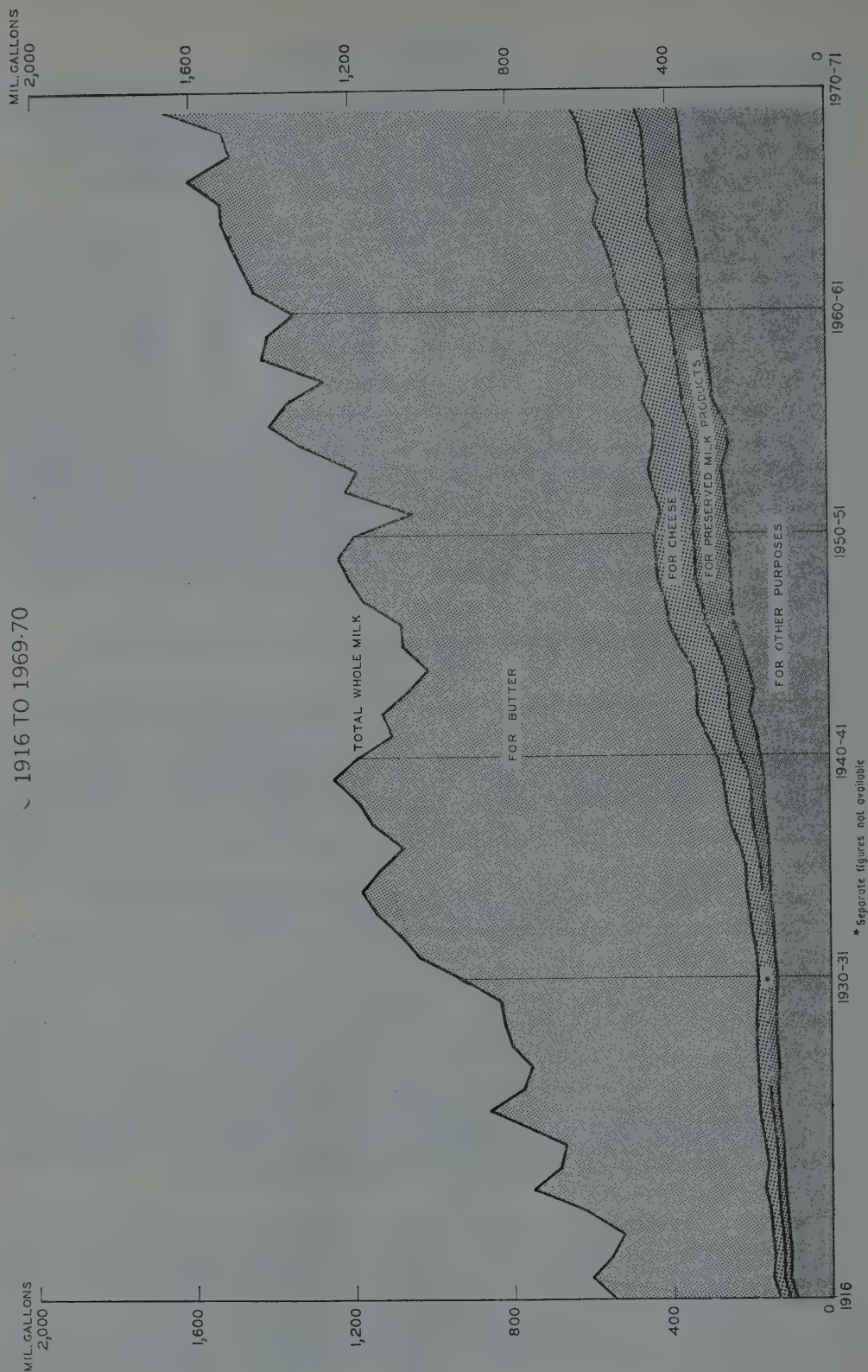
**UTILISATION OF WHOLE MILK: STATES AND TERRITORIES, 1969-70**  
 ('000 gallons)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust
Milk used for—									
Butter . . .	136,219	649,109	102,094	33,722	25,895	74,067	..	..	1,021,105
Cheese . . .	16,340	69,118	20,304	39,645	3,266	11,921	..	..	160,597
Processed milk products . . .	27,716	62,788	69,003 {	32,867	1,294	4,426	..	..	103,557
Other purposes . . .	130,601	111,363			25,419	12,799	97	939	375,755
<b>Total . . .</b>	<b>310,876</b>	<b>892,378</b>	<b>191,401</b>	<b>106,236</b>	<b>55,873</b>	<b>103,213</b>	<b>97</b>	<b>939</b>	<b>1,661,013</b>

In 1969-70, 61.5 per cent of the total milk supply was used for butter, 9.7 per cent for cheese, 6.2 per cent for processed milk products, and 22.6 per cent for other purposes.

# MILK PRODUCTION AND UTILISATION: AUSTRALIA

1916 TO 1969-70



\* Separate figures not available

**PRODUCTION AND UTILISATION OF WHOLE MILK: AUSTRALIA**  
**1965-66 TO 1969-70**  
('000 gallons)

Year	Total production	Quantity used for—			
		Factory butter	Factory cheese	Processed milk products(a)	Other purposes(b)
1965-66	1,522,013	949,270	126,575	99,221	346,947
1966-67	1,604,725	1,011,000	146,547	99,502	347,676
1967-68	1,497,484	892,898	149,444	98,555	356,587
1968-69	1,530,597	908,565	158,286	98,945	364,802
1969-70	1,661,013	1,021,105	160,597	103,557	375,755

(a) Quantities of milk used to produce two or more products (for example, initially as full cream milk and subsequently as skim milk) are counted once only. (b) Principally fluid milk for domestic purposes. Includes milk used for farm production of butter and cheese.

**Production of butter, cheese and processed milk products**

The establishment of large central butter factories, either on a co-operative or independent basis, has resulted in a considerable reduction in the cost of manufacture. The product is also of a more uniform quality, and whereas formerly the average quantity of milk used per pound of hand-made butter was about three gallons, factory butter requires only about two gallons. In addition, subsidy payments by the Commonwealth Government are made only on factory-produced butter. As a result the production of farm-made butter has declined to negligible proportions. A similar position exists in the cheese-making industry.

In 1967-68 factories classified to industry sub-classes Butter factories, Cheese factories, and Condensed and processed milk factories numbered 315 and were distributed among the States as follows: New South Wales, 69; Victoria, 109; Queensland, 60; South Australia, 38; Western Australia, 16; and Tasmania, 23. More details regarding numbers of factories, output, etc., are given in the chapter Manufacturing Industry.

Factory production of butter in 1969-70 was 494,206,000 lb. This was 4,989,000 lb (1.0 per cent) more than the previous record of 489,217,000 lb attained in 1966-67.

**BUTTER PRODUCTION IN FACTORIES: STATES, 1965-66 TO 1969-70**  
('000 lb)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1965-66	73,901	250,680	70,189	16,160	18,133	31,370	460,433
1966-67	86,392	266,907	74,375	15,092	14,394	32,056	489,217
1967-68	71,281	241,240	63,546	12,133	13,248	30,865	432,313
1968-69	52,172	280,206	43,083	14,507	13,937	35,315	439,220
1969-70	63,881	313,753	50,258	17,268	13,014	36,033	494,206

Factory production of cheese in 1969-70 reached a record level of 168,206,000 lb, which was 3,368,000 lb (2.0 per cent) more than the previous record of 1968-69.

**CHEESE PRODUCTION IN FACTORIES: STATES, 1965-66 TO 1969-70**  
('000 lb)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1965-66	9,786	58,158	17,773	36,281	2,712	6,590	131,300
1966-67	12,023	67,907	23,071	38,598	3,807	8,427	153,834
1967-68	12,074	73,570	22,181	32,773	4,373	10,414	155,385
1968-69	12,201	75,256	17,871	42,218	4,458	12,834	164,838
1969-70	18,705	73,866	20,491	39,437	3,787	11,921	168,206

**FACTORY PRODUCTION OF CHEESE BY VARIETIES: AUSTRALIA**  
**1965-66 TO 1969-70**  
('000 lb)

	1965-66	1966-67	1967-68	1968-69	1969-70
Fetta . . . . .	969	1,042	1,124	n.a.	n.a.
Cheddar . . . . .	119,176	137,657	138,655		
Cottage . . . . .	1,561	1,876	2,215		
Edam . . . . .	436	531	691		
Blue Vein . . . . .	106	187	102		
Grating . . . . .	6,148	8,975	9,790		
Soft . . . . .					
Other . . . . .					
	2,904	3,566	2,808		
Total cheese . . . . .	131,300	153,834	155,385	164,838	168,206

Processed milk products are manufactured mainly in Victoria, which produced 61 per cent of the total (in terms of whole milk equivalent) in 1969-70. New South Wales accounted for 26 per cent and the remaining States for 13 per cent.

**PRODUCTION OF PROCESSED MILK PRODUCTS: AUSTRALIA, 1965-66 TO 1969-70**  
('000 lb)

	1965-66	1966-67	1967-68	1968-69	1969-70
Condensed, concentrated and evaporated milk—					
Full cream—					
Sweetened(a) . . . . .	73,985	61,510	47,316	40,437	36,551
Unsweetened . . . . .	88,482	91,700	87,946	98,658	100,656
Skim . . . . .	21,196	24,974	18,932	19,045	18,603
Ice cream mix (liquid) . . . . .	15,198	15,422	9,065	7,245	8,906
Infants', invalid and health beverages—					
Infants' milk powder . . . . .	13,723	14,535	16,233	17,601	21,186
Other(b) . . . . .	31,557	34,813	32,001	36,981	35,388
Casein . . . . .	50,712	45,812	44,815	64,963	71,139
Powdered milk—					
Full cream—					
Spray . . . . .	42,888	46,276	46,125	53,083	50,869
Roller . . . . .	2,172	1,742	1,147	1,341	1,091
Skim—					
Without added ingredients—					
Spray . . . . .	84,018	162,351	161,071	123,395	171,184
Roller . . . . .	14,466	13,153	18,606	14,679	13,756
With added ingredients—					
Baker's powder . . . . .	5,577	5,401	5,937	5,765	8,182
Other . . . . .	8,281	7,679	10,415	13,076	15,809
Buttermilk or mixed skim and buttermilk—					
Spray . . . . .	8,345	12,829	15,836	14,902	21,794
Roller . . . . .	17,555	19,689	17,756	19,735	18,976
<b>Total powdered milk . . . . .</b>	<b>183,301</b>	<b>269,120</b>	<b>276,893</b>	<b>245,976</b>	<b>301,661</b>

(a) Includes 'coffee and milk'.

(b) Includes malted milk and milk sugar (lactose).



**Wholesale prices of butter and cheddar cheese in Australia**

Details of prices operating in each of the States since 1 July 1956 are shown in the following table. The prices included are those determined by the Commonwealth Dairy Produce Equalisation Committee Ltd for choicest grade bulk butter and cheddar cheese.

**WHOLESALE PRICES OF BUTTER AND CHEDDAR CHEESE: AUSTRALIA**

(\$ per cwt)

<i>Date from which prices became effective</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>
<b>Butter—</b>						
1 July 1956 . . . . .	46.67	46.67	46.55	46.43	46.67	46.67
1 July 1958 . . . . .	48.53	48.53	48.42	48.42	48.53	48.53
1 July 1960 . . . . .	50.17	50.17	50.05	50.17	50.17	50.17
19 June 1964 . . . . .	51.80	51.80	51.80	51.80	51.80	51.80
14 February 1966 . . . . .	52.08	52.08	52.08	52.08	52.08	52.08
31 March 1969 . . . . .	54.60	54.60	54.60	54.60	54.60	54.60
<b>Cheddar cheese—</b>						
1 July 1956 . . . . .	28.23	28.23	28.23	28.12	28.23	28.23
1 July 1958 . . . . .	29.17	29.17	29.17	29.17	29.17	29.17
1 July 1960 . . . . .	29.63	29.63	29.63	29.63	29.63	29.63
19 June 1964 . . . . .	30.57	30.57	30.57	30.57	30.57	30.57
14 February 1966 . . . . .	30.80	30.80	30.80	30.80	30.80	30.80
7 November 1966 . . . . .	33.04	33.04	33.04	33.04	33.04	33.04
10 November 1970 . . . . .	34.16	34.16	34.16	34.16	34.16	34.16

**Local consumption of butter and cheese**

Following the cessation of butter rationing after the 1939–45 War, consumption per head rose to 31.2 lb in 1951–52. However, in later years it gradually declined, and in 1969–70, at 20.5 lb per head, it reached its lowest level since the war. Consumption of cheese per head rose steadily in recent years and in 1965–66 reached a record level of 7.9 lb. There was a slight decline thereafter, however in 1969–70 it attained a new record figure of 8.1 lb per head.

**PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE  
AUSTRALIA, 1965-66 TO 1969-70**

Year	Change in stocks(a) (‘000 lb)	Factory pro- duction (‘000 lb)	Exports(b) (‘000 lb)	Apparent consumption in Australia	
				Total (‘000 lb)	Per head per year (lb)
BUTTER					
1965-66	+ 19,398	460,433	190,607	250,428	21.8
1966-67	— 872	489,217	234,611	255,478	21.8
1967-68	— 3,068	432,313	177,331	258,050	21.6
1968-69	+ 11,471	439,220	170,709	257,040	21.1
1969-70.	+ 12,974	494,206	226,075	255,157	20.5
CHEESE					
1965-66	-16,916	131,300	56,964	91,251	7.9
1966-67	+ 5,248	153,834	57,423	91,162	7.8
1967-68	-10,527	155,385	76,249	89,663	7.5
1968-69	+12,375	164,838	56,494	95,968	7.9
1969-70.	-22,532	168,206	90,199	100,540	8.1

(a) Balance figure (includes imports). (b) Includes ships' stores; figures for butter include ghee and butter concentrate expressed as butter.

## Average returns from butter and cheddar cheese sold

The table below shows rates realised on local, interstate and overseas sales and the average equalisation and subsidy rates in operation for the years ended June 1966 to 1971.

**BUTTER AND CHEDDAR CHEESE: RATES REALISED ON SALES, AVERAGE  
EQUALISATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER  
DAIRYING INDUSTRY ACTS, 1965-66 TO 1970-71**

(Source: Commonwealth Dairy Produce Equalisation Committee Ltd)

(\$ per cwt)

Year	Rates realised on sales				Average equalisa- tion rate	Rate of subsidy	Rate of overall return to manu- facturer
	Intrastate	Interstate	Manu- facturing	Overseas			
Butter—							
1965-66 . .	50.06	47.47	32.26	30.63	40.27	6.01	46.28
1966-67 . .	49.88	47.46	31.97	29.87	39.38	5.66	45.04
1967-68 . .	49.22	47.17	31.87	27.60	39.50	6.31	45.81
1968-69 . .	(a)	(a)	(a)	(a)	(b)38.75	(b)6.02	(b)44.77
1969-70 . .	(a)	(a)	(a)	(a)	(b)38.00	(b)5.55	(b)43.55
1970-71 . .	(a)	(a)	(a)	(a)	(b)35.20	(b)8.63	(b)43.83
Cheddar cheese—							
1965-66 . .		29.43		21.38	25.99	2.36	28.34
1966-67 . .		31.24		21.52	27.01	2.04	29.05
1967-68 . .		31.53		17.81	25.04	2.38	27.42
1968-69 . .		(a)		(a)	(b)24.70	(b)2.87	(b)27.57
1969-70 . .		(a)		(a)	(b)24.00	(b)2.65	(b)26.65
1970-71 . .		(a)		(a)	(b)23.75	(b)3.27	(b)27.02

(a) Not yet available. (b) Interim rates.

The distribution between factory and farm of the overall return to manufacturers for butter is shown in the following table.

**COMMERCIAL BUTTER: AVERAGE OVERALL RETURNS  
AUSTRALIA, 1965-66 TO 1970-71**

(Source: Commonwealth Dairy Produce Equalization Committee Ltd)

(Cents per lb)

Year	Rate of overall return to manufacturer	Estimated manufacturing cost	Return to dairy farmer
1965-66 . . . .	41.324	4.449	36.875
1966-67 . . . .	40.216	4.583	35.633
1967-68 . . . .	40.904	4.583	36.321
1968-69 . . . .	(a)39.969	4.750	35.219
1969-70 . . . .	(a)38.911	4.911	34.000
1970-71 . . . .	(a)39.134	5.161	33.973

(a) Interim rates.

## Overseas trade in dairy products

The production of butter and cheese in Australia is considerably in excess of local requirements, and consequently a substantial surplus is available for export overseas. In normal circumstances the extent of this surplus is chiefly dependent upon seasonal conditions.

Exports of butter in 1969-70 amounted to 179.8 million lb, compared with 140.9 million lb in 1968-69. Exports of cheese in these years were 90.0 million lb and 56.1 million lb respectively. The principal importing country for Australian butter in 1969-70 was the United Kingdom, accounting for 85.5 per cent of total exports. In 1969-70 United Kingdom replaced Japan as the principal importing country for Australian cheese with 27.2 per cent of total shipments.

All butter and cheese exported comes under the provisions of the Exports (Dairy Produce) Regulations and is subject to supervision, inspection and examination by officers appointed for that purpose. These commodities are graded according to quality, which has been fixed by regulation

as follows: flavour and aroma, 50 points; texture, 30 points; and condition, 20 points. Butter and cheese graded at 93 to 100 points is of choicest quality; at 90 to 92 points, first quality; at 86 to 89 points, second quality; and at 80 to 85 points, pastry or cooking quality or, in the case of cheese, third quality.

In the following table particulars are given of the relative proportions of butter and cheese graded for export according to quality. Further details, which include actual quantities by States, will be found in *Rural Industries*, 1968-69, Bulletin No. 7.

**BULK BUTTER AND CHEESE GRADED FOR EXPORT: AUSTRALIA, 1967-68 TO 1969-70**

Grade	Quantity ('000 lb)			Percent		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
<b>BUTTER(a)</b>						
Choicest quality . . . . .	136,312	145,577	176,642	80.2	86.1	87.7
First quality . . . . .	25,581	16,923	18,716	15.1	10.0	9.3
Second and pastry quality(b) . . . . .	8,021	6,658	6,002	4.7	3.9	3.0
<b>Total . . . . .</b>	<b>169,914</b>	<b>169,158</b>	<b>201,360</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>CHEESE</b>						
Bulk cheddar—						
Choicest quality . . . . .	19,967	29,036	22,723	26.2	35.0	28.0
First quality . . . . .	40,214	31,339	34,248	52.7	37.8	42.3
Second quality(b) . . . . .	1,972	2,721	4,236	2.6	3.3	5.2
Other cheese . . . . .	14,154	19,839	19,831	18.5	23.9	24.5
<b>Total . . . . .</b>	<b>76,307</b>	<b>82,935</b>	<b>81,038</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Includes unsalted. (b) Includes rejected.

Exports of butter, cheese and other milk products of Australian origin are shown in the following table.

**EXPORTS OF DAIRY PRODUCTS: AUSTRALIA, 1967-68 TO 1969-70**

	Quantity ('000 lb)			Value (\$'000 f.o.b.)		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Butter(a) . . . . .	148,634	140,865	179,827	39,114	34,745	43,750
Cheese(b)—						
Processed(c) . . . . .	11,049	16,922	20,367	4,352	6,070	6,580
Other—						
Cheddar and epicure cheddar . . . . .	55,479	28,821	62,016	11,085	5,417	11,027
Parmesan (incl. parmigiano and reggiono) . . . . .	129	64	70	43	30	33
Other . . . . .	9,379	10,289	7,584	2,453	2,355	1,928
<b>Total cheese . . . . .</b>	<b>76,036</b>	<b>56,096</b>	<b>90,037</b>	<b>17,933</b>	<b>13,872</b>	<b>19,570</b>
Other milk products—						
Preserved, condensed, concentrated, etc.—						
Sweetened . . . . .	13,228	12,653	10,606	1,741	1,570	1,385
Unsweetened . . . . .	11,638	10,512	13,130	1,350	1,189	1,504
Infants' and invalids' food (essentially of milk)(d) . . . . .	26,783	29,079	29,652	8,827	9,171	8,802
Casein . . . . .	37,020	58,217	66,812	8,227	10,809	12,094
Dried or powdered—						
Full cream . . . . .	24,865	30,006	33,789	6,958	7,435	7,557
Skim . . . . .	87,025	88,259	116,751	9,493	6,127	8,316

(a) Excludes butter concentrate, ghee, and ships' stores. (b) Excludes ships' stores. (c) Includes pastes and spreads. (d) Includes malted milk.

### The pig industry

In line with the general trend of increased specialisation common to most of the rural industries, pig farming has developed into a separate industry being no longer mainly associated with the dairy industry.

At 31 March 1970 the number of pigs in Australia reached a record level of 2,398,000 which represented an increase of 145,000 (6.4 per cent) on the previous record at 31 March 1969 (2,253,000).

#### PIGS: NUMBERS IN STATES AND TERRITORIES, 1966 TO 1970

At 31 March	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.(a)
1966 . . .	479,768	383,509	417,235	223,586	144,022	96,156	2,275	1,746,551
1967 . . .	513,575	350,591	467,572	222,334	160,983	85,654	2,791	1,803,500
1968 . . .	645,196	376,990	520,141	242,319	182,507	86,517	1,999	2,055,669
1969 . . .	690,226	421,655	535,496	288,019	219,787	95,363	2,488	2,253,034
1970 . . .	707,703	494,624	479,586	350,748	250,051	111,275	3,873	2,397,860

(a) Incomplete; excludes Australian Capital Territory.

A long-term comparison of pig numbers is given in the division Pastoral Production of this chapter (see page 793). A map showing the distribution of pigs in Australia at 31 March 1963 faces page 1083, Year Book No. 50 and a graph showing the number of pigs in Australia from 1870 onwards appears on plate 41 of this Year Book (see page 795).

#### PIGS SLAUGHTERED: STATES AND TERRITORIES, 1965-66 TO 1969-70 (<sup>000</sup>)

Year	Slaughtering passed for human consumption									Total slaugh- terings (in- cluding boiled down)
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
1965-66	774	703	640	298	195	146	2	9	2,769	2,777
1966-67	849	698	666	316	214	149	2	9	2,903	2,912
1967-68	908	700	735	310	242	143	3	9	3,049	3,058
1968-69	1,008	771	800	317	263	139	3	10	3,310	3,319
1969-70	1,065	895	757	386	316	160	3	12	3,593	3,605

#### Production of pigmeat, bacon and ham

##### PRODUCTION OF PIGMEAT (CARCASS WEIGHT): STATES AND TERRITORIES 1965-66 TO 1969-70 (Tons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1965-66 . . .	35,343	33,195	31,394	15,223	10,444	7,023	93	428	133,143
1966-67 . . .	38,283	33,094	33,255	15,947	11,584	7,164	87	386	139,800
1967-68 . . .	41,129	33,204	36,739	15,787	13,159	6,890	93	383	147,386
1968-69 . . .	46,313	36,582	39,168	15,939	14,006	7,024	107	460	159,599
1969-70 . . .	49,032	40,355	37,280	19,765	16,718	7,881	87	386	171,504

##### PRODUCTION OF BACON AND HAM (CURED CARCASS WEIGHT): STATES 1965-66 TO 1969-70 (Tons)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1965-66 . . .	15,055	9,357	12,342	4,106	4,298	1,062	46,220
1966-67 . . .	15,366	9,995	14,670	4,403	4,624	1,242	50,300
1967-68 . . .	15,134	9,340	14,103	4,110	5,128	1,281	49,096
1968-69 . . .	14,748	9,872	15,189	3,998	5,417	1,394	50,618
1969-70 . . .	15,947	11,891	14,068	4,933	5,678	1,381	53,898



**Consumption of pigmeat, bacon and ham**

The apparent consumption of pigmeat increased from 16.1 lb per head in 1968-69 to a record post-war figure of 16.6 lb in 1969-70.

**PRODUCTION AND DISPOSAL OF PIGMEAT (CARCASS WEIGHT): AUSTRALIA  
1965-66 TO 1969-70**

Year	Change in stocks(a)	Production	Exports	Curing and canning	Apparent consumption (as pork or smallgoods) in Australia	
					Total	Per head per year
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1965-66	..	133.1	0.5	64.3	68.4	13.3
1966-67	-1.1	139.8	0.9	69.8	70.2	13.4
1967-68	+0.9	147.4	0.6	68.1	77.9	14.6
1968-69	+0.4	159.6	1.2	70.3	87.7	16.1
1969-70	+0.2	171.5	5.1	74.5	92.1	16.6

(a) Includes allowance for imports.

**PRODUCTION AND DISPOSAL OF BACON AND HAM (CURED CARCASS  
WEIGHT): AUSTRALIA, 1965-66 TO 1969-70**

Year	Change in stocks	Pro- duction	Exports	Canning	Apparent consumption in Australia	
					Total	Per head per year
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb
1965-66	+0.2	46.2	0.2	7.0	38.8	7.6
1966-67	-0.2	50.3	0.2	8.1	42.1	8.1
1967-68	+0.1	49.1	0.2	7.7	41.1	7.7
1968-69	..	50.6	0.2	8.1	42.4	7.8
1969-70	+0.3	53.9	0.2	7.3	46.2	8.3

**Exports of pigs and pig products**

**EXPORTS OF PIGS AND PIG PRODUCTS: AUSTRALIA, 1967-68 TO 1969-70**

		Quantity			Value (\$'000 f.o.b.)		
		1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Bacon and ham (including canned)	'000 lb	574	498	572	448	377	415
Lard	'000 lb	72	42	35	14	8	6
Frozen pork	'000 lb	1,239	2,658	11,358	540	935	4,050
Pigs, live	number	806	1,600	933	47	93	47

**The poultry industry**

Once part of the mixed farming sector the poultry industry is now a highly specialised and distinct industry. The bulk of the commercial production is obtained from this source, though many farm households and some private homes in suburban areas keep poultry to supply their domestic needs and some supplies from this source are also marketed. Because the data from this latter sector is incomplete, details of poultry numbers throughout Australia are not published. There is an increasing tendency for producers in the large scale commercial sector to specialise in either egg production or the production of poultry meats. These two sectors of the industry each have separate statistics and separate research schemes. Both sectors are good examples of the general movement towards specialised, large scale capital intensive production which is common to all rural industries.

### Stabilisation scheme for the egg industry

A Commonwealth industry stabilisation scheme for the egg industry has been in operation since 1 July 1965. The principal features of the scheme are embodied in three Commonwealth Acts—*Poultry Industry Levy Act 1965–1966*, *Poultry Industry Levy Collection Act 1965–1966*, and *Poultry Industry Assistance Act 1965–1966*.

The scheme provides for the imposition of a levy on hens over six months of age kept for commercial purposes. The money obtained from the levy is used to meet trading losses on surplus eggs. Previously, returns to producers were equalised by State Egg Boards, who imposed an equalisation deduction to cover deficits which resulted from sales to overseas markets.

In determining the rate of the hen levy, the Minister for Primary Industry is required to take into consideration any recommendations by the Council of Egg Marketing Authorities of Australia (which consists of all members of the State Egg Marketing Boards) and is precluded from prescribing a rate in excess of such recommendations. The maximum rate of levy permitted under the legislation is \$1 per hen per annum. The levy is payable fortnightly by the owner of the hen. The levy operated at its maximum in 1968–69 and 1969–70. It was apportioned at a rate of 4 cents per hen per fortnight for the first 24 fortnights and 2 cents per hen per fortnight for the remaining two fortnights, in accordance with the recommendations of the Council of Egg Marketing Authorities of Australia.

Exemptions from payment are granted on the first twenty hens in each flock and also on a substantial proportion of broiler breeder hens. The eggs produced by broiler breeder hens which are not used for hatching determine the proportion of those hens on which the levy becomes payable in accordance with a formula incorporated in the legislation.

By arrangement between the Commonwealth and State Governments, the State Egg Boards collect the levy due in each State from individual producers and remit the total amount to the Commonwealth (the Department of Primary Industry collects the levy in the Australian Capital Territory). The Commonwealth Government pays into the Poultry Industry Trust Fund amounts equal to the receipts obtained from the hen levy. These amounts totalled \$11,114,000 in 1969–70 (\$10,786,000 in 1968–69). Payments from the Fund are made to the State Governments for financial assistance to the poultry industry, and are authorised by the Minister for Primary Industry, after consideration has been given to the recommendations by the Council of Egg Marketing Authorities of Australia. Payments from the Trust Fund totalled \$11,346,000 in 1969–70 (\$10,918,000 in 1968–69).

### Research

The *Poultry Industry Assistance Act 1965–1966* permits expenditure from the Poultry Industry Trust Fund to be made for research. The Commonwealth Government has agreed to match expenditure from this Fund on a \$1 for \$1 basis with a limit to its contribution of \$100,000 per annum. There is no restriction on the amount which may be expended from the Fund for research purposes.

Research projects are recommended by the Council of Egg Marketing Authorities of Australia for approval by the Minister for Primary Industry. Expenditure may be approved for scientific, technical or economic research, the publication of reports thereon, the training of persons for research, and the dissemination of information and advice on scientific, technical or economic matters.

### Chicken Meat Research

In June 1969, a research scheme for the chicken meat industry was established along lines similar to those operating for the wool, wheat, dairy, meat, tobacco and poultry industries. The operative Acts are the *Chicken Meat Research Act, 1969*, the *Meat Chicken Levy Act, 1969* and the *Meat Chicken Collection Act, 1969*. This legislation provides for a levy of one-tenth of a cent on each meat chicken hatched before 1 July, 1972 and, thereafter, for a levy at a prescribed rate not exceeding one-quarter of a cent per meat chicken hatched. Hatcheries, hatching less than 20,000 meat chickens per annum, are exempt from the levy. The legislation also provides that the industry levy be paid into a Trust Account and that research expenditure therefrom be matched on a \$ for \$ basis by the Commonwealth. On this basis, it is estimated that funds currently available for research will be approximately \$160,000 per annum.

### Marketing of eggs

Details of the *Egg Export Control Act 1947–1966* were given in earlier issues of the Year Book (see No. 47, page 997).

### Chicken hatching and poultry slaughterings

Statistics shown in the following section have been compiled on a Commonwealth basis since 1965–66 from returns supplied by commercial chicken hatcheries (i.e. those making sales of day-old chicks) and by commercial poultry slaughtering establishments. Poultry farmers hatching chicks

solely for replenishing their own flocks, producers in the Northern Territory and the many very small producers are excluded from the collection. However, the statistics represent a high level of coverage in respect of commercial hatcheries and slaughtering establishments.

### Poultry slaughtered for human consumption

No allowance has been made in the following figures for interstate movement of dressed poultry or changes in stocks held, and figures therefore do not necessarily represent the level of consumption in the States concerned.

Statistics for poultry slaughtered in Queensland are based on numbers slaughtered as collected by the Queensland Department of Primary Industries. From 1968-69, New South Wales slaughtering statistics include poultry slaughtering by producers in the Australian Capital Territory.

### NUMBERS OF POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION 1965-66 TO 1969-70 (<sup>'000</sup>)

Year	Chickens(a)	Other fowls(b)	Ducks and drakes	Turkeys
1969-70				
New South Wales . . .	38,853	2,958	538	982
Victoria . . .	16,562	1,643	246	172
Queensland . . .	14,175	1,245	74	75
South Australia . . .	5,597	287	46	34
Western Australia . . .	8,479	433	45	52
Tasmania . . .	978	115	19	16
<b>Australia . . .</b>	<b>84,644</b>	<b>6,681</b>	<b>968</b>	<b>1,331</b>
1968-69 . . .	75,174	6,025	1,010	916
1967-68 . . .	76,361	5,403	790	660
1966-67 . . .	67,085	4,760	775	694
1965-66 . . .	52,551	4,601	841	481

(a) Comprises broilers, fryers and roasters. (b) Comprises hens, roosters, etc.

### DRESSED WEIGHT OF POULTRY SLAUGHTERED FOR HUMAN CONSUMPTION(a) 1965-66 TO 1969-70 (<sup>'000</sup> lb)

Year	Chickens(b)	Other fowls(c)	Ducks and drakes	Turkeys	Total
1969-70—					
New South Wales . . .	107,819	10,266	1,948	9,881	129,915
Victoria . . .	45,059	5,826	880	1,655	53,420
Queensland(d) . . .	41,752	4,850	313	577	47,493
South Australia . . .	13,879	996	187	340	15,403
Western Australia . . .	21,357	1,590	214	507	23,668
Tasmania . . .	2,566	363	62	141	3,131
<b>Australia . . .</b>	<b>232,432</b>	<b>23,891</b>	<b>3,605</b>	<b>13,101</b>	<b>273,029</b>
1968-69 . . .	206,651	21,875	3,849	8,335	240,709
1967-68 . . .	197,350	19,671	3,099	6,363	226,482
1966-67 . . .	168,130	16,940	2,997	7,093	195,159
1965-66 . . .	127,551	15,910	3,419	5,122	152,002

(a) Dressed weight of all birds, including pieces and giblets, as reported in all States except Queensland. (b) Comprises dressed weight of broilers, fryers and roasters. (c) Comprises dressed weight of hens, roosters, etc. (d) Estimated.

### Chicken hatchings in commercial hatcheries

Details contained in the following tables relate to all eggs set and to chicks hatched in commercial hatcheries whether for sale as day-old chicks or for replenishment of own flocks.

**NUMBER OF EGGS SET<sup>(a)</sup> IN COMMERCIAL HATCHERIES: STATES, 1965-66 TO 1969-70**  
(<sup>'000</sup>)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>MEAT STRAINS</b>							
1965-66 . . .	40,226	18,758	n.a.	5,089	(b)	953	(c)65,026
1966-67 . . .	50,141	19,626	n.a.	6,215	(b)	1,227	(c)77,209
1967-68 . . .	54,270	20,655	17,969	7,407	(b)	(b)	112,484
1968-69 . . .	51,667	20,120	18,381	6,546	(b)	(b)	109,832
1969-70 . . .	60,438	21,946	20,233	8,090	(b)	(b)	124,529

<b>EGG STRAINS</b>							
1965-66 . . .	19,096	10,956	n.a.	4,464	3,362	1,067	(c)38,945
1966-67 . . .	19,847	12,206	n.a.	5,352	3,784	761	(c)41,950
1967-68 . . .	19,510	12,578	8,823	5,060	3,256	1,024	50,251
1968-69 . . .	19,971	13,104	8,909	5,049	3,660	904	51,597
1969-70 . . .	22,447	14,440	9,925	5,971	3,665	1,206	57,654

(a) Includes eggs which failed to hatch. (b) Not available for publication. (c) Incomplete; see individual States.

**CHICKENS HATCHED<sup>(a)</sup> IN COMMERCIAL HATCHERIES: STATES, 1965-66 TO 1969-70**  
(<sup>'000</sup>)

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.</i>
<b>INTENDED FOR CHICKEN MEAT—MEAT STRAINS</b> (Unsexed)							
1965-66 . . .	26,136	13,705	n.a.	3,501	(b)	582	(c)43,924
1966-67 . . .	34,163	14,486	n.a.	4,383	(b)	833	(c)53,865
1967-68 . . .	37,629	15,806	13,456	5,218	(b)	(b)	80,874
1968-69 . . .	35,563	15,546	13,765	5,053	(b)	(b)	79,538
1969-70 . . .	41,464	17,334	14,882	6,173	(b)	(b)	89,835

**INTENDED FOR CHICKEN MEAT—EGG STRAINS**  
(Crossbred and other cockerels)(d)

1965-66 . . .	3,109	2,135	n.a.	274	324	107	(c)5,949
1966-67 . . .	1,743	1,509	n.a.	230	313	72	(c)3,867
1967-68 . . .	1,545	1,567	759	134	105	43	4,153
1968-69 . . .	1,191	880	457	180	66	19	2,794
1969-70 . . .	1,846	1,462	431	373	58	7	4,177

**INTENDED FOR EGG PRODUCTION—EGG STRAINS**  
(Pullets)(d)

1965-66 . . .	5,934	3,710	n.a.	1,525	1,077	372	(c)12,618
1966-67 . . .	6,293	4,114	n.a.	1,925	1,253	273	(c)13,858
1967-68 . . .	6,093	4,251	2,862	1,904	1,143	371	16,624
1968-69 . . .	6,310	4,455	2,922	1,854	1,246	299	17,085
1969-70 . . .	7,110	4,977	3,169	2,136	1,314	408	19,115

(a) Excludes chicks destroyed. (b) Not available for publication. (c) Incomplete; see individual States. (d) Includes (for States other than Queensland) a proportion of unsexed egg strain chicks.

**Recorded production of eggs and egg products**

Available statistics of the production and disposal of eggs in Australia are restricted to those recorded by the Australian Egg Board and the Egg Marketing Board of New South Wales. Details of production as recorded by these authorities are shown in the following table.



**SHELL EGGS: PRODUCTION(a) RECORDED BY EGG BOARDS  
STATES, 1965-66 TO 1969-70**  
(<sup>'000 dozen</sup>)

State	1965-66	1966-67	1967-68	1968-69	1969-70
New South Wales(b)	65,240	68,043	74,682	76,062	82,021
Victoria	29,925	34,100	38,231	41,147	47,613
Queensland	17,062	20,474	21,393	20,854	23,837
South Australia	11,218	13,176	15,813	15,692	16,655
Western Australia	9,295	9,810	11,583	11,491	12,716
Tasmania	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Total(c)</b>	<b>132,740</b>	<b>145,603</b>	<b>161,702</b>	<b>165,247</b>	<b>182,842</b>

(a) Receipts from consignors and sales by producer agents. (b) Includes Australian Capital Territory.  
(c) Excludes Tasmania.

Particulars of the production of whole egg pulp as recorded by the Egg Marketing Board for the State of New South Wales and by the Australian Egg Board for the other States are shown in the following table.

**LIQUID WHOLE EGG PULP: PRODUCTION RECORDED BY EGG BOARDS  
STATES, 1965-66 TO 1969-70**  
(<sup>'000 lb</sup>)

State	1965-66	1966-67	1967-68	1968-69	1969-70
New South Wales	12,540	15,734	14,532	15,691	22,009
Victoria	3,286	6,029	8,841	10,093	13,305
Queensland	5,450	6,809	7,877	5,288	7,988
South Australia	4,148	4,953	7,024	5,370	6,074
Western Australia	977	1,143	1,802	1,510	1,964
Tasmania	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Total(a)</b>	<b>26,401</b>	<b>34,667</b>	<b>40,076</b>	<b>37,952</b>	<b>51,340</b>

(a) Excludes Tasmania.

In addition to liquid whole egg, production was also recorded of liquid egg whites and liquid egg yolks. Output in 1969-70 amounted to 8,071,000 lb and 5,563,000 lb respectively, compared with 7,112,000 lb and 4,928,000 lb respectively, in the previous year. These figures exclude small quantities produced in Tasmania for which details are not available.

**Consumption of eggs and egg products**

Because of the operation of producers outside the control of the Egg Boards and the extent of 'back-yard' poultry-keeping, for which no statistics are collected, figures relating to total egg production must be accepted with some reserve. The production shown in the following table, together with details of exports and consumption, is based upon the records of Egg Boards of production from areas under their control, plus estimates of production from uncontrolled areas and from 'back-yard' poultry-keepers.

**ESTIMATED PRODUCTION AND DISPOSAL OF EGGS IN SHELL  
AUSTRALIA, 1965-66 TO 1969-70**

Year	Change in stocks	Estimated total production	Exports(a)	For drying and pulping(b)	Apparent consumption in Australia	
					Total	Per head per year
	mil. doz	mil. doz	mil. doz	mil. doz	mil. doz	doz
1965-66	-0.3	228.1	4.7	27.2	196.5	17.1
1966-67	+0.2	237.8	5.3	31.3	201.0	17.2
1967-68	-0.3	253.3	6.5	42.3	204.7	17.2
1968-69	-0.1	257.4	7.6	41.0	208.9	17.2
1969-70	..	272.4	5.1	53.6	213.6	17.2

(a) Includes ships' stores. (b) Includes wastage.

Details of the annual consumption of shell eggs, liquid whole egg and total shell egg equivalent per head of population are shown in the following table.

**SUPPLIES OF EGGS AND EGG PRODUCTS AVAILABLE  
FOR CONSUMPTION: AUSTRALIA, 1965-66 TO 1969-70**  
(Per head per year)

Year				Liquid whole egg and egg powder(a)		Total	
	Eggs in shell			number		Number	Weight(b)
				number	number		lb
1965-66	.	.	.	205	15	220	27.5
1966-67	.	.	.	206	13	220	27.5
1967-68	.	.	.	206	14	221	27.6
1968-69	.	.	.	206	14	220	27.5
1969-70	.	.	.	206	14	220	27.5

(a) In terms of number of eggs in shell.  
Australia is taken as 2 oz.

(b) The average weight of an egg in

### Overseas trade in poultry products

Australian exports of shell eggs in 1969-70 amounted to 3,956,000 dozen compared with 6,043,000 dozen in 1968-69. The main outlets for Australian eggs in 1969-70 were Trucial States (767,000 dozen), Hong Kong (632,000 dozen), Kuwait (532,000 dozen) and Bahrain (505,000 dozen).

**EXPORTS OF POULTRY PRODUCTS: AUSTRALIA**  
1967-68 TO 1969-70

				Quantity			Value (\$'000 f.o.b.)		
				1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Eggs in shell	.	.	'000 doz	5,813	6,043	3,956	1,417	1,356	987
Eggs not in shell—									
In liquid form	.	.	'000 lb	25,707	28,505	38,493	4,115	4,214	6,211
Dry	.	.	'000 lb	144	99	125	81	31	94
Frozen poultry	.	.	'000 lb	2,102	2,699	3,682	694	858	1,098
Poultry, live(a)	.	.	number	167,060	86,574	418,987	42	24	125

(a) Includes day-old chicks.

Imports of canned poultry in 1969-70 amounted to 156,000 lb, valued at \$64,000, compared with 210,000 lb, valued at \$70,000, in 1968-69.

## The bee-farming industry

### Production of honey and bees-wax

Although practised as a separate industry, bee-farming is also carried on in conjunction with other branches of farming. A feature of the industry is that it consists mainly of itinerant apiarists operating on a large scale with mobile equipment. Some of these apiarists move as far afield as from Victoria to Queensland in an endeavour to provide a continuous supply of nectar from flora suitable for their bees. Production of honey in 1969-70 amounted to 49,072,000 lb (133.4 lb per productive hive) compared with 29,081,000 lb (96.6 lb per productive hive) in 1968-69. Bees-wax produced in 1969-70 was 676,000 lb compared with 425,000 lb in the previous year.

In the following tables, statistics for 1969-70 for each State are confined to apiarists with five or more hives, except in New South Wales where, since 1966-67, details relate to beekeepers with six or more hives. Prior to 1966-67, statistics for States other than Queensland related to beekeepers with five or more hives. In Queensland, details were confined to beekeepers on rural holdings with five or more hives and to beekeepers not on rural holdings with ten or more hives.

## BEEHIVES, HONEY AND BEES-WAX: STATES AND A.C.T., 1969-70

State or Territory	Beehives(a)			Honey produced		Bees-wax produced	
	Pro- ductive	Unpro- ductive	Total	Quantity	Gross value	Quantity	Gross value
	'000	'000	'000	'000 lb	\$'000	'000 lb	\$'000
New South Wales . . .	138	47	185	18,731	1,648	254	148
Victoria . . . . .	77	25	102	8,220	800	103	65
Queensland . . . . .	39	21	60	3,144	304	49	30
South Australia . . . .	68	11	79	10,638	944	157	88
Western Australia . . .	37	8	45	7,409	600	99	58
Tasmania . . . . .	8	2	10	821	120	13	7
Australian Capital Terri- tory . . . . .	1	..	1	109	11	1	1
Australia . . . . .	368	114	482	49,072	4,427	676	397

(a) At 30 June 1970.

The production of honey and bees-wax fluctuates considerably and is determined mainly by the flow of nectar from flora, particularly the eucalypts, which varies greatly from year to year.

HONEY AND BEES-WAX PRODUCTION: STATES AND A.C.T., 1965-66 TO 1969-70  
( '000 lb)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	A.C.T.	Aust.
HONEY								
1965-66 . . . . .	7,343	9,608	1,472	9,929	10,923	630	80	39,985
1966-67 . . . . .	10,580	7,160	3,461	6,588	6,882	385	100	35,158
1967-68 . . . . .	21,014	7,580	4,116	6,844	3,410	841	153	43,958
1968-69 . . . . .	10,654	3,638	1,718	5,770	6,553	671	78	29,081
1969-70 . . . . .	18,731	8,220	3,144	10,638	7,409	821	109	49,072
BEES-WAX								
1965-66 . . . . .	95	115	25	136	138	8	1	519
1966-67 . . . . .	137	88	52	93	99	7	1	477
1967-68 . . . . .	281	92	66	105	49	13	2	609
1968-69 . . . . .	145	50	32	92	94	11	1	425
1969-70 . . . . .	254	103	49	157	99	13	1	676

## Honey levy

A levy is imposed on domestic sales of honey for the purpose of financing the operations of the Australian Honey Board. The current rate of levy, which became effective on 14 February 1966, is four-tenths of a cent per lb, but under the provisions of the *Honey Levy Act* 1962-65, it can be increased by regulation to a maximum of one cent per lb. The proceeds of this levy may be expended on the regulation of Australian exports of honey and on associated promotional and research activities. In 1967-68, 1968-69 and 1969-70 collections amounted to \$96,000, \$106,000 and \$102,000 respectively.

## Overseas trade in bee products

The principal importer of Australian honey in 1969-70 was the United Kingdom, accounting for 60.8 per cent, by value, of total exports.

Bees-wax was exported mainly to the United Kingdom and Japan in 1969-70.

## EXPORTS OF HONEY AND BEES-WAX: AUSTRALIA, 1967-68 TO 1969-70

	Quantity ('000 lb)			Value (\$'000 f.o.b.)		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Honey . . . . .	n.a.	12,246	14,695	1,197	1,480	1,775
Bees-wax . . . . .	471	301	250	321	200	166

## Value of dairy, poultry and bee-farming production

## Value of dairy, poultry and bee-farming production

Values of dairy, poultry and bee-farming production for 1969-70 and earlier years are shown in the following tables. Further information on values, including definitions of the terms used, is given in Chapter 30, Miscellaneous.

GROSS VALUE OF DAIRY, POULTRY AND BEE-FARMING PRODUCTION: AUSTRALIA  
1965-66 TO 1969-70  
(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
DAIRYING					
Whole milk used for—					
Butter(a) . . . . .	154,862	165,635	134,089	148,148	172,762
Cheese(a) . . . . .	25,603	33,345	31,148	29,994	29,344
Processed milk products . . . . .	24,197	25,355	23,084	23,245	23,075
Other purposes . . . . .	149,589	148,955	154,280	154,547	161,283
Subsidy paid on whole milk for—					
Butter . . . . .	24,500	24,500	24,100	23,313	23,581
Cheese . . . . .	2,500	2,500	2,900	3,687	3,419
<i>Total, whole milk (including subsidy)</i> . . . . .	381,250	400,289	369,602	382,935	413,466
Pigs slaughtered . . . . .	77,284	83,961	89,598	86,842	96,066
Dairy cattle slaughtered . . . . .	49,438	39,563	44,849	43,967	37,703
<i>Total, dairying</i> . . . . .	507,973	523,814	504,050	513,742	547,239
POULTRY					
<i>Total, poultry</i> . . . . .	154,603	174,451	172,488	179,160	187,710
BEE-FARMING					
Honey . . . . .	4,103	3,765	4,259	2,760	4,427
Bees-wax . . . . .	224	224	367	259	397
<i>Total, bee-farming</i> . . . . .	4,323	3,992	4,627	3,021	4,824

(a) Excludes Commonwealth subsidy which is shown separately.



GROSS, LOCAL AND NET VALUE OF DAIRY PRODUCTION  
STATES AND TERRITORIES, 1969-70  
(\$'000)

<i>State or Territory</i>	<i>Gross production valued at principal markets</i>	<i>Marketing costs</i>	<i>Local value of production</i>	<i>Value of materials used in process of production</i>	<i>Net value of production (a)</i>
New South Wales . . . .	154,938	12,292	142,646	(b)22,690	119,956
Victoria . . . . .	225,141	13,561	211,580	24,240	187,340
Queensland . . . . .	70,959	5,075	65,884	15,217	50,667
South Australia . . . . .	40,834	914	39,920	11,732	28,188
Western Australia . . . . .	25,927	1,454	24,473	14,623	9,850
Tasmania . . . . .	28,774	1,516	27,258	4,900	22,358
Northern Territory . . . . .	157	4	153	n.a.	153
Australian Capital Territory . . . . .	509	26	483	118	365
<b>Australia . . . . .</b>	<b>547,239</b>	<b>34,842</b>	<b>512,397</b>	<b>93,520</b>	<b>418,877</b>

(a) No deduction has been made for depreciation and maintenance.  
power, power kerosene, petrol and other oils.

(b) No allowance has been made for costs of

**Indexes of quantum and price of dairy, poultry and bee production**

For details of these indexes *see* Chapter 30, Miscellaneous.



## CHAPTER 24

### WATER CONSERVATION AND IRRIGATION

#### RESOURCES, UTILISATION AND NATIONAL AND INTERSTATE ASPECTS

Official Year Book No. 51, pages 228–31, contains a description of recent developments in the measurement of Australia's water resources. For information concerning general, descriptive and historical matter *see also* Year Book No. 37, pages 1096–1141.

An article on droughts in Australia appeared in Year Book No. 54, pages 991–6.

For further details on geographical and climatic features determining the Australian water pattern, *see* the chapter Physical Geography and Climate; on water supply and sewerage in metropolitan areas, cities and towns, the chapter Local Government; and on the generation of hydro-electric power, the chapter Electric Power Generation and Distribution, of this issue.

A series of maps showing the location of major dams and reservoirs and the various irrigation schemes operating in each of the States may be found on pages 259–65 of Year Book No. 46, and a map showing the extent of known artesian basins throughout Australia is shown on page 273 of Year Book No. 48.

#### Water resources and their utilisation

##### Surface supplies

An assessment of Australia's surface water resources has been made, based on measured and estimated stream flows within 197 river basins, as follows. The total average annual discharge of Australian rivers has been assessed at 280 million acre feet. This can be divided into 108 million acre feet measured discharge and 172 million acre feet estimated for areas where there are generally no gauging records. For the whole area of Australia (approximately 3 million square miles) only 1.9 million square miles are regarded as contributing to stream flow (i.e. there is practically no flow from Western Plateau drainage division and from arid parts of other divisions).

The flow of Australian rivers is small in comparison with the flow of rivers in other continents, some examples of which, expressed as mean annual discharges in millions of acre feet, are: Amazon, 2,950; Mississippi, 465; Mekong, 405; Niger, 308; Volga, 205; and the ten major rivers of the United States of America in the aggregate, 900.

##### Major dams and reservoirs

The table below lists existing major dams and reservoirs, together with those under construction and those projected, at June 1970. The list is confined to dams and reservoirs with a capacity of 100,000 acre feet or more. There are many others of smaller capacity in Australia. As a general rule, the figures shown for the height of wall (feet) refer to the vertical distance measured from the lowest point of the general foundations to the 'crest' of the dam, i.e. the level of the roadway or walkway on the dam.

#### MAJOR DAMS AND RESERVOIRS IN AUSTRALIA

Name	Location	Capacity (acre feet)	Height of wall (feet)	Remarks
EXISTING DAMS AND RESERVOIRS				
Eucumbene	Eucumbene River, New South Wales	3,890,000	381	Part of Snowy Mountains Hydro-electric Scheme
Eildon	Upper Goulburn River, Vic- toria	2,750,000	260	Storage for irrigation and for the generation of electricity
Hume	Murray River, near Albury, New South Wales	2,480,000	167	Part of Murray River Scheme—storage for domestic, stock and irrigation purposes. Hydro-electric power also developed
Miena	Great Lake, Tasmania	1,710,000	60	Storage for Poatina hydro-electric power station

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued*

<i>Name</i>	<i>Location</i>	<i>Capacity (acre feet)</i>	<i>Height of wall (feet)</i>	<i>Remarks</i>
<b>EXISTING DAMS AND RESERVOIRS—<i>continued</i></b>				
Warragamba . . .	Warragamba River, New South Wales	1,670,000	450	For Sydney water supply. Also provides for generation of hydro-electricity
Menindee Lakes Storage	Darling River, near Menindee, New South Wales	1,468,700	60	Part of Darling River Water Conservation Scheme
Burrendong . . .	Macquarie River, near Wellington, New South Wales	1,361,000	250	Storage for rural water supplies and flood mitigation
Blowering . . . .	Tumut River, New South Wales	1,322,400	368	For regulation of discharges from stations of Snowy Mountains Hydro-electric Scheme, primarily for irrigation but also for hydro-electric power generation
Burrinjuck . . . .	Murrumbidgee River, New South Wales	837,000	264	Storage primarily for irrigation also production of hydro-electric power
Somerset . . . . .	Stanley River, Queensland .	735,000	173	Brisbane-Ipswich water supply, flood mitigation and small hydro-electric power station
Jindabyne . . . .	Snowy River, New South Wales	558,000	235	Part of Snowy Mountains Hydro-electric Scheme
Lake Victoria . . .	Murray River, near South Australian border, in New South Wales	551,700	..	Natural off-river storage for irrigation in South Australia. Storage improved by construction of embankments and control regulators
Wyangala . . . . .	Lachlan River, New South Wales	(a)543,800	(b)220	Storage for domestic, stock and irrigation purposes. (See also under Dams and Reservoirs under Construction)
Lake Echo . . . . .	Lake Echo, Tasmania . . .	442,000	60	Storage for Lake Echo hydro-electric power station (and seven others downstream)
Clark . . . . .	Derwent River, Tasmania . .	434,000	220	Storage for Butler's Gorge and Tarraleah hydro-electric power stations (and six others downstream)
Arthur Lakes . . .	Source of Lake River, near Great Lake, Tasmania	410,000	50	Part of Great Lake hydro-electric power development
Keepit . . . . .	Namoi River, near Gunnedah, New South Wales	345,300	177	Storage primarily for irrigation also production of hydro-electric power
Waranga . . . . .	Goulburn River, Victoria . .	333,400	45	For irrigation storage
Tinaroo Falls . . .	Barron River, North Queensland	330,000	155	For irrigation purposes in the Marceba-Dimbulah area
Glenbawn . . . . .	Hunter River, near Scone, New South Wales	293,300	251	Storage for irrigation purposes and flood mitigation
Rocklands . . . . .	Glenelg River, Victoria . . .	272,000	93	Part of Wimmera-Mallee domestic and stock water supply system
Eppalock . . . . .	Campaspe River, near Heathcote, Victoria	252,860	150	To supplement supply to Bendigo and for irrigation
Tantangara . . . .	Murrumbidgee River, New South Wales	206,000	148	Part of Snowy Mountains Hydro-electric Scheme
Devil's Gate . . . .	Mersey River, North Tasmania	190,000	250	Storage for Mersey Forth power development
Avon . . . . .	Avon River, New South Wales	173,800	232	Part of Sydney water supply
Upper Yarra . . . .	Yarra River, Victoria . . . .	162,000	293	For Melbourne water supply
Wuruma . . . . .	Nogo River, Central Queensland	157,000	151	For irrigation along Burnett River
Glenmaggie . . . .	Gippsland, Victoria . . . .	154,300	121	Storage for irrigation
Lake St Clair . . . .	Central Highlands, Tasmania	154,200	..	Improved natural storage for eight Derwent River hydro-electric power stations
Wellington . . . . .	Collie River, Western Australia	150,100	121	For supply of water to irrigation districts and to agricultural areas and country towns
Grahamstown . . . .	Grahamstown River, near Newcastle, New South Wales	147,000	35	To supplement supply to Newcastle and district
Koombooloomba . . .	Tully River, North Queensland	146,000	170	For hydro-electric and irrigation purposes
Serpentine . . . . .	Serpentine River, Western Australia	144,000	181	For Perth water supply
Cethana . . . . .	Mersey River, North Tasmania	143,000	360	Storage for Mersey Forth power development
Lake Brewster . . . .	Lachlan River, near Hillston, New South Wales	123,900	..	Storage of rural water supplies for the lower Lachlan
Cairn Curran . . . .	Loddon River, Victoria . . . .	120,600	144	For irrigation storage
Rowallan . . . . .	Mersey River, North Tasmania	110,000	140	Storage for Mersey Forth power development
Eungella . . . . .	Broken River, North Queensland	106,000	160	Provision of cooling water for Collinsville power station, supply to Collinsville town and for irrigation purposes

For footnotes see end of table.



## MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—continued

Name	Location	Capacity (acre feet)	Height of wall (feet)	Remarks
<b>DAMS AND RESERVOIRS UNDER CONSTRUCTION</b>				
Lakes Gordon and Pedder	South-west Tasmania: Gordon River . . . . . Serpentine River . . . . . Upper Huon River . . . . . Lake Edgar . . . . .	9,440,000 2,400,000	450 135 160 50	Storage for Gordon River power development
Ord River (main)	Near Wyndham, Western Australia	4,600,000	300	
Fairbairn Dam . . . . .	Nogo River, Central Queensland	(c)1,170,000	160	
Copeton . . . . .	Gwydir River, New South Wales	1,105,000	370	
Wyangala . . . . .	Lachlan River, New South Wales	987,100	280	Strengthening and enlarging of existing dam for increased water supply for domestic stock and irrigation purposes (See also under Existing Dams and Reservoirs)
Talbingo . . . . .	Tumut River, New South Wales	747,000	530	Part of Snowy Mountains Hydro-electric Scheme
Ross River . . . . .	Near Townsville, Queensland	338,000	115	Flood mitigation and water supply to Townsville (First and Second Stages)
Mokoan . . . . .	Winton Swamp, near Benalla, Victoria	300,000	35	For irrigation storage
Cardinia . . . . .	Near Emerald, Victoria	220,000	260	For off river storage for Melbourne water supply
<b>DAMS AND RESERVOIRS PROJECTED</b>				
Chowilla(d) . . . . .	Murray River, in South Australia, near Victorian border	5,000,000	86	Regulation of the lower Murray River
Dartmouth(d) . . . . .	Mitta Mitta River in North-Eastern Victoria	3,000,000	590	Additional regulation of Upper Murray flow to secure River Murray irrigation development
Buffalo (second stage) . . . . .	Buffalo River, near Myrtleford, Victoria	800,000	260	For irrigation storage
Monduran . . . . .	Kolan River, near Gin Gin, Queensland	475,000	171	For irrigation storage
Warkworth . . . . .	Wollombi Brook, Hunter Valley, New South Wales	406,000	130	Flood mitigation and irrigation dam for Hunter Valley
Windamere . . . . .	Cudgegong River, New South Wales	280,000	200	For irrigation storage
Pike Creek . . . . .	Near Stanthorpe, Queensland	200,000	150	For irrigation, part of Dumaresq-Barwon Border Rivers Scheme
North Pine . . . . .	North Pine River, near Petrie, Queensland	164,000	142	To supplement supply to northern Brisbane area
Tallowa . . . . .	Shoalhaven River and Kangaroo River Junction, New South Wales	120,000	140	Water supply and pumped storage power development

(a) Present (temporary) storage capacity.

(b) Maximum height of water at wall.

(c) Subject to final survey.

(d) See page 846.

**Irrigation**

For some brief remarks on the history of irrigation in Australia see issues of the Year Book prior to No. 39. An article on the conservation and use of water in Australia appeared in Year Book No. 37, page 1096.

**Irrigation research**

Comprehensive programmes of research and investigation are being pursued by State water and agricultural authorities and the Commonwealth Scientific and Industrial Research Organization, often in collaboration. Special attention is being given to the following: high water tables due to the application of water; surface accumulation of salt and other soil changes associated with irrigation; methods of applying water efficiently; soil treatments to improve the physical condition of irrigated heavy clay soils; the utilisation of irrigated pastures by stock; and growth problems affecting plants and trees.

Irrigation is studied by the Commonwealth Scientific and Industrial Research Organization at a number of its research stations and laboratories, the principal one being the Division of Irrigation Research at Griffith (New South Wales), where investigations are concerned with limiting the degradation of land by irrigation, improving the quality and range of irrigated crops, and assessing the

amount of water required by irrigated crops and the most economical means of applying it. The crops being studied include citrus, cotton, rice, lucerne and vegetables. Special attention is also given to the manner in which plants utilise carbon dioxide from the air with water and nutrients from the soil. The Organization's Division of Plant Industry studies irrigated water movement in soils, evaporation from field crops, water movement in plants and the physics of water stress at Canberra (Australian Capital Territory); irrigated tobacco at Mareeba (Queensland); and summer forage crops, winter legume crops and irrigated pastures at Swan Coastal Plain (Western Australia). At Adelaide (South Australia) and Merbein (Victoria) the Division of Horticultural Research is working on problems of the dried-fruit industry and on wine grapes and pome-fruit. The Division of Land Research conducts research on rice at the Coastal Plains Research Station, Darwin (Northern Territory), and on a number of irrigated crops, including rice, safflower, linseed, and cotton, at the Kimberley Research Station (Western Australia). The Division has also carried out a number of hydrological investigations in connection with the utilisation of underground water for irrigation. The Division of Applied Geomechanics is studying the engineering aspects of water movement through earth embankments. The Division of Soils is studying methods of reducing seepage from earthen dams, and takes part in the examination of the physical properties of sediments beneath proposed dam sites. The Division of Soils is also looking at underground water movement and the water balance in the south-east of South Australia, and at the drainage and soil moisture regime of the irrigated swamps of the lower Murray River.

The Irrigation Research and Extension Committee plays an important part in the agricultural activity of the Murrumbidgee Irrigation areas and associated districts, and the Coleambally Irrigation Area. It is representative of the New South Wales Department of Agriculture, the Commonwealth Scientific and Industrial Research Organization, the Rural Bank of New South Wales, the Soil Conservation Service of New South Wales, the Water Conservation Service of New South Wales, the Rice Marketing Board of New South Wales, the Wine Grape Marketing Board of New South Wales, co-operative and secondary industries, and farmers' organisations. Finance is provided by these authorities on an agreed basis. The objectives are: to enable the agricultural extension services to the farmers in the defined sub-region to be continued and developed; to provide a system for advising on local agricultural policy and organisation; to provide means for farmer opinion to have due weight in the consideration of regional agricultural administration and policy; to achieve a unified approach to sub-regional extension in all branches of agriculture; to advise on the research needs of the sub-region and to co-ordinate the agricultural research of the various rural institutions working therein; to achieve close liaison between research and extension; and to conduct research in extension methods.

Two other organisations with similar objectives are the Victorian Irrigation Research and Promotion Organisation which operates from Shepparton, and the Murray Research and Extension Committee centred at Deniliquin.

### Preservation of catchments

Since water conservation commences on the catchments it is becoming increasingly recognised that anything which interferes with catchment efficiency affects the quantity of water available for all purposes. Active steps are being taken to counteract soil erosion, to conserve soil generally, and to minimise the effects of floods, overstocking, bush fires, and the destruction of vegetative cover. All States and the Commonwealth have initiated forestry policies which provide for reafforestation and the preservation of catchments. In recent years efforts to counteract soil erosion have been intensified, and there is some evidence of a more unified approach to catchment, water, forestry, and land use, factors regarded as parts of a single problem.

### Sub-surface supplies

Much of Australia's underground water is obtained from artesian and sub-artesian basins and is used for stock purposes and domestic use. These supplies are indispensable in the dry areas which comprise most of the inland and extensive coastal areas as well. The quality of water ranges from usable to very saline.

Considerable use is also made of sub-surface water, other than pressure water, from localised groundwater basins, particularly in the well-settled areas. The water is used mainly for domestic and stock purposes. Compared with other countries with similar rainfall and climate, underground water is not used extensively for town and individual industrial supplies and irrigation, but its use for these purposes is increasing.

*Artesian and sub-artesian supplies.* Pressure water (either artesian or sub-artesian), variable in quantity and quality, is obtainable in many parts of Australia, the various artesian basins extending over about half the continent. A map of Australia showing the extent of the known artesian basins appears on page 273 of Year Book No. 48.

The Great Artesian Basin, the most extensive in the world, underlies an area of approximately 676,250 square miles, comprising about 421,000 in Queensland, 135,000 in South Australia, 81,250 in New South Wales and 39,000 in the Northern Territory. A table showing the principal defined water-bearing basins in Australia was published in Year Book No. 56, page 851.

More than 18,000 artesian bores have been drilled within the Great Artesian Basin, while the daily free discharge from all bores continuing to flow in Australia has been stated as exceeding 350 million gallons, of which the loss by evaporation and seepage has been estimated at more than 90 per cent. Sub-artesian bores and wells throughout Australia number more than 200,000.

Artesian water generally is good stock water, but most is unsuitable for plant life; in certain areas sub-artesian waters are suitable for all uses. Some of these areas are in the Canning, Murray, Georgina and Barkly, Perth, Ord-Victoria, Pirie-Torrens and Adelaide Basins. In the Eucla Basin and parts of the Murray and Pirie-Torrens Basins the water is of poor quality, being barely suitable for stock.

In common with other countries possessing artesian supplies, Australia has been faced with the problem of flow diminution. It was recognised early that flows were diminishing as more bores were drilled, but it is now considered that while many of these bores will ultimately cease to flow, others will assume a perpetually steady rate of flow, corresponding with the average recharge from rainfall absorbed by permeable outcrops, mainly sandstone and limestone. Diminution in flows from artesian bores has emphasised the need to eliminate wastage as much as possible. Licences now issued for the construction of new artesian bores prohibit the distribution of water through drains, channels, etc., and the supplies must be confined to the borehead or piped to appropriate watering points.

#### PRINCIPAL WATER-BEARING BASINS IN AUSTRALIA

Name	State	Geological age of chief aquifers	Approximate area	Depth to pressure water
			square miles	feet
Great Artesian	Queensland, New South Wales, South Australia and Northern Territory	Mesozoic	676,250	Up to 7,000
Canning	Western Australia	Mesozoic-Palaeozoic	150,000	100 to 1,800
Murray	Victoria, New South Wales and South Australia	Miocene-Eocene	109,000	100 to 1,300
Georgina (including Barkly and Daly)	Northern Territory, Queensland	Cretaceous, Ordovician, Cambrian, and Upper Proterozoic	108,000	150 to 1,000
Eucla	Western Australia, South Australia	Pliocene-Miocene	74,000	300 to 2,000
Carnarvon	Western Australia	Cretaceous, Permian	45,000	200 to 4,000
Perth	Western Australia	Recent, Jurassic	21,000	200 to 2,500
Western District (Otway)	Victoria	Pleistocene-Upper Cretaceous	13,000	100 to 4,500
Basins of Ord-Victoria region	Northern Territory, Western Australia	Mainly Cambrian, and Permian	12,000	200 to 1,000
Pirie-Torrens	South Australia	Recent, Pleistocene	9,000	Up to 600
East Gippsland	Victoria	Pleistocene-Eocene	3,500	200 to 3,500
Adelaide	South Australia	Recent, Oligocene	1,100	200 to 600

*Shallow groundwater.* Shallow groundwater supplies are used in various parts of Australia for industry, irrigation, stock, and domestic purposes. Two examples of the use of these shallow supplies for industrial and domestic purposes occur in New South Wales. The Hunter District Water Board pumps up to 15 million gallons a day (average use over 30 years is 9.2 million gallons per day) for general use from the Tomago coastal sands near Newcastle, and at Botany, Sydney, private industry pumps 8-10 million gallons a day for its own use from similar sands. Exploration of the coastal sands north of the Tomago Sands has revealed a further potential production of 25 million gallons a day. Examples of the use of shallow groundwater supplies for irrigation include the Burdekin Delta and the Bundaberg area in Queensland. In the Burdekin Delta, which covers an area of some 200 square miles, the present extraction for irrigation from underground sources is in the region of 200,000 acre feet per annum (about 150 million gallons a day) and in the Bundaberg area it is approximately 50,000 acre feet per annum (about 37 million gallons a day).



Schemes for artificial recharge of underground supplies have been implemented on both sides of the Burdekin River delta. Diversions from unregulated river flows of 61,000 acre feet per annum to the north side and of 40,200 acre feet per annum (when available) to the south side have been authorised.

In recent years there has been a marked increase, particularly in Queensland, New South Wales and Victoria, in investigation into the groundwater resources of river and coastal alluvium for irrigation and town water supplies.

### National and interstate aspects

In terms of the Commonwealth Constitution primary responsibility for control and conservation of water rests with the individual State Governments. The Commonwealth Government is responsible for matters relating to water in its Territories. However, because political boundaries sometimes intersect river valleys and underground water basins, co-operation between Governments has been necessary to develop resources in certain cases. Specific examples of Commonwealth-State and interstate co-operation and approach are given in the following paragraphs.

#### Australian Water Resources Council

The Australian Water Resources Council was established by joint action of the Commonwealth and State Governments in 1962. The council comprises Commonwealth and State Ministers primarily responsible for water resources, with the Commonwealth Minister for National Development as Chairman, and is serviced by a Standing Committee consisting mainly of the heads of Departments responsible to these Ministers, and by a number of technical committees, including one on water quality.

The primary objective of the Council is the provision of a comprehensive assessment on a continuing basis of Australia's water resources, and the extension of measurement and research to provide a sound basis for the planning of future development. In terms of its objectives and functions, the Council has dealt with a wide range of topics, making recommendations and stimulating action by appropriate bodies.

An accelerated water resources measure programme involving many more new or improved gauging stations and groundwater investigations by Commonwealth and State Government authorities began in 1964-65. The Commonwealth Government approved extension of the programme until 30 June 1973. In addition to its own commitments in the Territories, the Commonwealth is assisting the State Governments with their programmes of water research investigations. Since 1962-63, the total annual expenditure on this programme by Australian Governments has increased more than three-fold to \$6.6 million in 1969-70.

The Commonwealth Government has provided \$400,000 during the three years ended 30 June 1971 for the Water Research Fund administered by the Council which has approved eighteen projects in a new research programme. This programme, aimed at improving the efficiency of water management in Australia, complements research already undertaken by Commonwealth agencies, universities and other organisations. For the triennium to 1974 the Commonwealth Government has allocated \$700,000.

Research results published include:

<i>Project number</i>	<i>The Australian Water Resources Council Research</i>
68/1	Hydrological data available from small rural catchments of Australia, a review and catalogue, Snowy Mountains Hydro Electric Authority, Cooma, November 1969.
68/2	Effects of land management on quantity and quality of available water; a review by W. C. Boughton, University of New South Wales, Water Research Laboratory, Manly Vale, May 1970.
68/6	Desalination, a Survey of Australian plants by L. S. Herbert and D. H. Moffatt, Department of National Development, Canberra 1970.

The Council has given attention to the collation of available data on Australia's water resources. In 1965, a *Review of Australia's Water Resources (Stream Flow and Underground Resources)* 1963 was published, this being the first official assessment. A *Review of Australia's Water Resources (Monthly Rainfall and Evaporation)* by the Bureau of Meteorology was issued in 1969. Other council publications include a twice a year Newsletter, a Hydrological Series, a Water Resources Research Inventory (published annually), a Stream Gauging Information Catalogue (published five-yearly with annual supplements) and miscellaneous publications. Systematic publication of information is encouraged.



The Council continues to support Australian participation in the scientific programme of the International Hydrological Decade (1965-74). An important contribution follows from the decision of the Council to establish ninety-three representative basins throughout Australia for detailed hydrological studies. The continuance and introduction of post-graduate study in hydrology is being encouraged at the universities. Under the auspices of the Council, a Groundwater School and a Colloquium for Hydraulics Laboratory Staff are held at about two-yearly intervals.

### National Water Resources Development Programme

In developing water resources, the Commonwealth Government's role in the past, while important, had been confined to assisting special projects or areas, e.g. the Snowy Mountains Scheme, participation in the River Murray Commission, and financial support for individual State projects such as the Ord River project. However, the National Water Resources Development Programme, announced in November 1966, represents a very important move towards closer collaboration between State and Commonwealth Governments, and a more continuing and detailed involvement by the Commonwealth in the development of Australia's water resources.

Under the National Water Resources Development Programme the Commonwealth has undertaken to provide grants to the States amounting to a total of about \$50,000,000 over five years for water conservation works aimed at reducing the hazards of droughts and expanding primary production. The grants under this programme apply to the Emerald dam and irrigation project in Central Queensland (\$20,000,000); two Victorian schemes to reduce salinity levels in the Murray River (\$3,600,000); Tailm Bend-Keith pipeline, South Australia (\$6,000,000); Copeton dam on the Gwydir River, New South Wales (\$20,000,000); King River dam, Victoria (\$4,000,000); and the Cressy-Longford irrigation scheme, Tasmania (\$750,000). In October 1969 the Commonwealth undertook to provide a further sum of \$100,000,000 under this programme. Further grants made are for major irrigation works in the Bundaberg region, Queensland (\$12,800,000), for flood mitigation works in New South Wales (\$9,000,000) and \$4,650,000 for assistance with construction of the Pike Creek Dam on the New South Wales-Queensland border rivers system.

Proposals submitted by the States are examined by the Commonwealth to determine which are suitable, from a national point of view, for inclusion in the Programme, and accordingly grants are announced from time to time.

### Murray River scheme

The Murray River and its tributaries form the largest river system in Australia. The catchment is approximately 408,000 square miles, or one-seventh of the area of the Australian continent, comprising five-sixths of New South Wales, over one-half of Victoria, one-sixth of Queensland and approximately one-fourteenth of South Australia. The Murray proper is 1,600 miles long. Its main tributaries are the Darling (1,700 miles), the Murrumbidgee (980 miles), and the Goulburn (350 miles). The average annual flow of each of the chief contributory streams is as follows: Upper Murray, including the Mitta Mitta and Kiewa Rivers, 3,820,000 acre feet; Darling River, 2,820,000 acre feet; Goulburn River (including Broken River), 2,580,000 acre feet; Murrumbidgee River, 2,050,000 acre feet; and Ovens River, 1,266,000 acre feet. Irrigated production in the Murray River Basin is mainly grapes for wine, dried fruits, fresh fruits, rice, vegetables, dairy produce, wool, and fat lambs.

*River Murray Waters Agreement.* For a brief summary of historical events leading up to the River Murray Agreement (1915) by the Governments of the Commonwealth, New South Wales, Victoria, and South Australia see issues of the Year Book prior to No. 39. Under the Agreement construction works are carried out by the States (which are also responsible for maintenance) subject to the approval and direction of the River Murray Commission. The Agreement provides that the minimum quantity of water to be allowed to pass for supply to South Australia in each year shall be sufficient to maintain certain specified flows in the lower river varying from 47,000 acre feet a month in the winter months to 134,000 acre feet a month in the four summer months of maximum demand—the total amounting to 1,254,000 acre feet over twelve months. The flow at Albury is shared equally by New South Wales and Victoria, and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation. For a brief outline of the operation of the Agreement prior to 1949 see Year Book No. 40, page 1065, and earlier issues.

At a conference of Ministers held in 1949 to consider the diversion of the Snowy River it was decided that, by diversion of streams in the Snowy Mountains area, an average of approximately 440,000 acre feet per annum would be added to the Murray River (see Snowy Mountains Hydro-electric Scheme, page 848) and that increased storage should be provided in order to give additional regulation of the Murray River itself as well as to provide for regulation of the diverted waters. Hydro-electric potentialities would also affect the size of the storage.

The River Murray Commission investigated the position and subsequently recommended to the contracting Governments that the River Murray Waters Agreement be amended to provide for enlargement of the Hume Reservoir by 500,000 acre feet to approximately 2,500,000 acre feet. A conference of Ministers in 1954 agreed to the enlargement, and it was also agreed that the Commission should be given power to construct regulators and to carry out such other work on the Murray River between Tocumwal and Echuca as it considered necessary to reduce the losses from the regulated flow in that stretch of the river. The amended Agreement was ratified in the Parliaments of the Commonwealth and the three States and was proclaimed on 7 April 1955. In view of the proposed diversions by the Snowy Mountains Authority to and from the Murray River, and for other reasons, amendments to those sections of the River Murray Waters Agreement dealing with the distribution of the waters of the Murray were considered desirable. Following ministerial conferences, amendments were ratified by the four Parliaments concerned, and came into force on 6 November 1958.

Further amendment of the Agreement to provide for the construction of a storage of approximately 5,000,000 acre feet capacity at Chowilla in South Australia was ratified by legislation in the Commonwealth and State Parliaments and came into force on 30 April 1964. However, in view of the greatly increased cost by the time the project came to tender in 1967 and other significant factors (including water quality in the Lower Murray) which had arisen in the interim, the River Murray Commission resolved that, pending further investigations, construction of Chowilla Dam should be deferred. Further investigations then followed, including a re-assessment of the likely yield from both Chowilla and alternative storages on the Upper Murray and Mitta Mitta Rivers.

Following careful consideration of this re-assessment, the River Murray Commission in February 1969 agreed that a 3,000,000 acre feet storage at Dartmouth on the Mitta Mitta River provided the greatest overall benefits in terms of cost and yield and should be the next development of the resources of the River Murray. The question of sharing the benefits could not be resolved by the Commission and was therefore referred to the respective Governments. Subsequently, Ministers representing the four Governments concerned met in March 1969 and agreed on conditions for the construction of the Dartmouth Project and for the sharing of the increased system yield between Victoria, New South Wales and South Australia. Among other things, the meeting of Ministers agreed to continue the Menindee Lakes Agreement (due to expire on 31 December 1969) in perpetuity.

The Commonwealth Government has offered to assist the three States with financing the project by way of a loan to the extent of 50 per cent of each State's contribution. At the same time the Commonwealth itself will make its own quarter contribution of the cost of the project.

Before work can proceed with detailed design and construction, it is necessary that each of the four Parliaments ratify appropriate amendments to the River Murray Waters Agreement. During 1970 an agreement was signed by the Commonwealth, New South Wales, Victorian and South Australian Governments which amongst other things provided for the commencement of construction of the Dartmouth Dam. However, although the Agreement has been ratified by the Commonwealth, New South Wales and Victorian Parliaments, it has not been ratified by the South Australian Parliament.

The 1969-70 irrigation season was characterised by high river flows and low demands during the first half, followed by a period of lower flows and higher demands during the latter half. Inflows to the Hume Reservoir during the year were slightly above average. Of the total flow of the River Murray and its tributaries in 1969-70, 4,772,000 acre feet was diverted and impounded by the State of New South Wales and 2,916,000 acre feet by Victoria and 412,000 acre feet was diverted by South Australia. During 1969-70, 4,471,000 acre feet was passed to South Australia compared with a figure of 3,904,000 acre feet in the year 1968-69. The actual diversion from the River Murray itself in 1969-70 by New South Wales was 1,184,000 acre feet, and by Victoria 1,249,000 acre feet.

*River Murray Works.* One of the major works of the Murray River scheme is the Hume Reservoir, situated just below the junction of the Murray and Mitta Mitta Rivers, ten miles above Albury, forming a lake of 50,000 acres. Work on the enlargement of the reservoir to its approved capacity of 2,480,000 acre feet was completed in 1961.

The Yarrawonga Diversion Weir, which was completed in 1939, raised the river level so that water could be diverted by gravitation into main channels constructed on either side of the river. Between the Yarrawonga Weir and the Murray mouth, thirteen weirs and locks have been built. Two flood diversion weirs have been constructed on the Murrumbidgee—one between Hay and the Lachlan junction and the other below the Lachlan junction.

The Mulwala Canal, supplied from the Yarrawonga Weir, has an off-take capacity of 2,500 cubic feet a second, serving 1,800,000 acres of land in New South Wales. The Yarrawonga Channel, on the Victorian side, has an off-take capacity of 1,250 cubic feet a second, serving 300,000 acres. Not all of this area is irrigated.



Adjoining the river in New South Wales, and 35 miles from the Murray-Darling junction, Lake Victoria storage, with a surface area of 27,670 acres, was completed in 1928. The water released from Lake Victoria is used by the South Australian settlements. The inlet channel to Lake Victoria was enlarged in 1957 to permit greater diversion of periodical flood flows of short duration.

Five barrages across channels near the Murray River mouth connecting Lake Alexandrina with the sea were completed in 1940 to prevent ingress of salt water to Lakes Alexandrina and Albert and to the lower river, thereby increasing the productivity of adjacent lands. The structures maintain a sufficiently high level for 50 miles up river to permit watering by gravitation of a considerable area of reclaimed river flats. The total distance across the barrages and intervening islands is 15 miles.

In addition to the works carried out under the auspices of the Commission, the separate States have constructed thousands of miles of distribution channels and have provided a number of storages on the tributaries, thereby contributing materially to the large amount of irrigation development in the Murray Basin. The main storages are: New South Wales—Menindee Lakes Storage (Darling), Burrinjuck (Murrumbidgee), Keepit (Namoi), Burrendong (Macquarie) and Wyangala (Lachlan); Victoria—Eildon (Goulburn), Waranga (Goulburn), Eppalock (Campaspe) and Cairn Curran (Loddon). Details of these and other State works on Murray tributaries will be found in the sections dealing with State systems.

#### New South Wales-Queensland Border Rivers Agreement

The catchments for the border streams of New South Wales and Queensland (2,000 square miles) extend to the granite areas in the vicinity of Tenterfield (New South Wales) and Stanthorpe (Queensland), and elevation rises to 3,000 feet. Average rainfall is 30 inches. The catchments and the areas suitable for irrigation are approximately equal in each State. Climatic conditions are such that from April to October it is necessary to supplement rainfall by irrigation to stabilise and increase production. The capacity of the area to grow lucerne and tobacco under irrigation has already been demonstrated. Other possible development of the area includes irrigation of cotton, root crops, cereals, and citrus fruit, and expansion of the fat stock industry.

The New South Wales-Queensland Border Rivers Agreement came into effect on 1 July 1947. The Agreement provides for the construction of certain works on those sections of the Severn, Dumaresq, MacIntyre, and Barwon Rivers which constitute part of the boundary between New South Wales and Queensland for the furtherance of water conservation, water supply and irrigation in those States.

The works to be constructed comprise a dam on the Dumaresq River at a site to be selected by the Water Conservation and Irrigation Commission of New South Wales (the constructing authority) to give a storage basin with a capacity as large as is reasonably practicable and not less than six nor more than twelve weirs as may be found necessary to meet the requirements of irrigation along the rivers. Provision is also made for the construction of not more than four regulators in the effluents from the barrier rivers and for the taking over of the existing weir on the MacIntyre River at Goondiwindi and the existing weir on the Barwon River at Mungindi (the Irrigation and Water Supply Commission of Queensland is the constructing authority for new weirs and regulators). The cost of these works and of administration are to be borne by the States in equal shares. The Agreement further provides that the water discharge from the Dumaresq storage, whether by regulated or unregulated flow, shall be available to the two States in equal shares.

After unfavourable foundation conditions were disclosed at several dam sites on the Dumaresq River, investigations were extended to tributary streams, and superficially suitable sites located on Pike Creek and the Mole River. A geophysical survey was made at each of these sites and preliminary comparative estimates were prepared to determine the relative economy of providing one large storage at Mingoola or two smaller storages on the tributaries. Following exploratory drilling of the tributary sites, a report dealing with alternative storage proposals and possible amendments to the existing Agreement was submitted to the participating States. Consequent upon these investigations an Amending Agreement was executed between the States of New South Wales and Queensland which included, *inter alia* provision for the construction of storages on Pike Creek (Queensland) and the Mole River (New South Wales). The new agreement also provided for investigation and construction of works for the improvement of flow and of the distribution of flow in streams which intersect the New South Wales-Queensland border west of Mungindi.

Works completed under the original agreement include Bonshaw and Cunningham Weirs on the Dumaresq River, a weir and regulator on the Barwon River at the off-take of the Boomi River, and a low level weir to establish a pumping pool at Glenarbon on the Dumaresq River. The existing Goondiwindi and Mungindi Weirs are being maintained, operated and controlled by the Queensland Irrigation and Water Supply Commission. Until a dam has been constructed it is unlikely that any other weirs will be required.

### Snowy Mountains Hydro-electric Scheme\*

Following a comprehensive investigation into both the water and power potential of the Snowy River waters by a Technical Committee representative of the Commonwealth and the States of New South Wales and Victoria in 1947 and 1948, and the submission by the Committee of reports in 1948 and 1949, the Commonwealth Parliament passed the *Snowy Mountains Hydro-electric Power Act* 1949 setting up an Authority to implement the proposals agreed upon.

The basis of the proposals was to impound the Snowy River waters at high elevations and, by diverting them into tunnels passing under the Alps, to use their potential power for the generation of electricity and then to discharge them into the Murray and Murrumbidgee River systems for use in the irrigation areas.

The scheme involves two main diversions, that of the Eucumbene, a tributary of the Snowy, to the Upper Tumut River, and that of the main stream of the Snowy River at Island Bend and Jindabyne to the Swampy Plain River. In addition, works required to make use of the waters of the Upper Murrumbidgee, the Upper Tumut, the Upper Tooma and the Geehi Rivers for power generation also provide additional regulation of these streams, and this makes more water available for irrigation. Details of the two trans-mountain diversions and the associated power works together with details of progress and construction are given in Chapter 28, Electric Power Generation and Distribution.

When all works are completed, it is estimated that the total gain by diversion and regulation will amount to 1,120,000 acre feet per annum to the Murrumbidgee and 800,000 acre feet per annum to the Murray. This additional water should be sufficient to provide irrigation for approximately 1,000 square miles of land, which is expected to result in a substantial increase in primary production.

### International aspects

Australia maintains contact with international developments in water conservation and irrigation through its membership, since 1952, of the International Commission on Irrigation and Drainage. This Commission was set up in India in 1950 in order that the technical experience of all countries might be pooled for the benefit of all, and to promote the development and application of the science and technique of irrigation and drainage in the engineering, economic and social aspects. The Commission is constituted of National Committees of participating countries, and sixty countries, including Australia have so far been admitted to membership.

The Central Office of the International Commission on Irrigation and Drainage is situated in New Delhi, India. Congresses, which are held every three years, have taken place in India, Algeria, the United States of America, Spain, Japan, in that order and again in India in 1966. The seventh Congress was held in Mexico in April 1969.

An Australian National Committee was established following a meeting of representatives of Australian authorities held in Melbourne in 1953. At that meeting it was decided, *inter alia*, 'that a National Committee should be formed and that the National Committee would consist of representatives of Government Departments, Statutory Authorities, firms, and individuals actively interested in irrigation and drainage'. The Committee meets annually.

### STATES AND TERRITORIES

The foregoing text deals with water conservation and irrigation in Australia generally and with international, national and interstate aspects. The following survey covers the local pattern of water resources and the steps taken by the State Governments to bring about their development. In the various States water policies tend to assume a distinctive and characteristic pattern closely allied with climatic conditions and specific local needs.

In Victoria almost every form of water scheme is in operation, in New South Wales major emphasis at present is on irrigation and stock development in the dry areas along the Murray and Murrumbidgee Rivers, though a substantial scheme of intensive irrigation is being conducted in the Murrumbidgee Irrigation Areas. In Queensland, up to the present, the predominant emphasis has fallen on water (mainly underground sources) for stock, and the development of small irrigation schemes in sub-humid and humid areas, especially to stabilise sugar production. Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest relates almost exclusively to hydro-electric generation. The Northern Territory is concerned primarily with stock supplies and the safeguarding of long stock routes.

\* See also the chapter Electric Power Generation and Distribution. For more detailed information see special article by the then Commissioner, Snowy Mountains Hydro-electric Authority (Sir William Hudson) which appeared in Chapter XXIX. Miscellaneous of Year Book No. 42.



## New South Wales

On page 1110 of Year Book No. 37 information is given on the pattern of rainfall and the history of irrigation in New South Wales. (See also the chapter Physical Geography and Climate of this issue.)

### Administration

The Water Conservation and Irrigation Commission of New South Wales consists of three members appointed by the Governor. The operations of the Commission cover water conservation, control of irrigation areas, the establishment, operation and maintenance of works for domestic and stock water supply, irrigation districts, flood control districts, sub-soil drainage districts, constitution of water trusts, the issue of licences for private irrigation, artesian and shallow boring, assistance under the provisions of the farm water supplies scheme, and river improvement works.

Under the Water Act, 1912–1955 the right to the use and flow, and the control of water in all rivers and lakes which flow through, or past, or are situated within, the land of two or more occupiers, is vested in the Commission for the benefit of the Crown. A system of licences operates for the protection of private works of water conservation, irrigation, water supply, drainage and prevention of inundation.

For particulars of the New South Wales–Queensland Border Rivers Agreement ratified by Acts of both States in 1947, see page 847 of this chapter.

### Schemes summarised

The bulk of irrigated land is along the Murray and its tributary the Murrumbidgee. Smaller areas are served by the Wyangala Dam, Lake Cargelligo and Lake Brewster on the Lachlan (a tributary of the Murrumbidgee), by Glenbawn Dam on the Hunter River, by Keepit Dam on the Namoi River, by Burrendong Dam on the Macquarie River, and by the Menindee Lakes Storage on the Darling River. None of the other rivers is regulated by large head storages, though weirs and dams have been provided for town supplies, etc. in many places. Copeton Dam on the Gwydir River is in the course of construction. In addition, substantial use is made of artesian and sub-artesian water in pastoral areas.

New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including irrigation areas, irrigation districts, water trust districts, flood control and irrigation districts, and river improvement districts. There are nine irrigation areas, although two of these, Yanco and Mirrool, are generally described under the one heading, namely, the Murrumbidgee Irrigation Areas. The Areas are: The Murrumbidgee Irrigation Areas, consisting of 451,263 acres served with water through a channel system stemming from the river at Berembend Weir; the Coomealla Irrigation Area of 34,626 acres, served by pumping from the Murray; the Curlwaa Irrigation Area of 10,393 acres, supplied from the Murray by pumping; the Hay Irrigation Area of 6,850 acres, supplied with water pumped from the Murrumbidgee; the Tullakool Irrigation Area of 18,006 acres, supplied from the Edward River by diversion at Stevens Weir; the Buronga (8,739 acres) and Mallee Cliffs (1,900 acres) Irrigation Areas, served by pumping from the Murray; and the Coleambally Irrigation Area (216,412 acres), served by diversion from the Murrumbidgee River. All these Areas are administered by the Commission.

The capacities of the main storages for irrigation in New South Wales (in acre feet) are:

*Darling*—Menindee Lakes Storages (1,468,700);

*Murray*—Half share of Hume Reservoir, weirs and locks to Wentworth (1,351,570); Stevens Weir, Edward River (7,165);

*Tumut* (tributary of Murrumbidgee)—Blowering Dam (1,322,400)

*Macquarie*—Burrendong Dam (964,200 irrigation storage; 396,800 flood mitigation storage);

*Murrumbidgee*—Burrinjuck Dam (837,000); Redbank Weir (7,360); Maude Weir (6,740);

*Namoi*—Keepit Dam (345,300);

*Lachlan*—Wyangala Dam (temporary capacity 543,800); Lake Brewster (123,900); Lake Cargelligo (29,430);

*Hunter*—Glenbawn Dam (185,300 acre feet irrigation storage; 108,000 acre feet flood mitigation storage);

*Belubula* (tributary of Lachlan River)—Carcoar Dam (30,000); and

*Snowy Mountains Hydro-electric Scheme*—Lake Eucumbene (3,890,000); Jindabyne Reservoir (558,000); Tantangara Dam (206,000).

The total length of supply channels, drains, escape channels and pipe lines constructed by the Water Conservation and Irrigation Commission in New South Wales is 5,169 miles. This comprises 3,503 miles of supply channels (including main canals), 1,597 miles of drains and escape channels, and 69 miles of pipe lines.

**Irrigated culture**

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1969-70 season.

**AREA OF LAND UNDER IRRIGATED CULTURE: NEW SOUTH WALES, 1969-70**

(Acres)

	Method of irrigation				
	Spray	Furrow	Flood	Multiple methods	Total area
Crops—					
Cereals—					
Barley . . . . .	1,605	40	11,845	85	13,575
Maize . . . . .	3,685	17,079	5,096	867	26,727
Oats . . . . .	13,432	1,068	17,011	242	31,753
Rice . . . . .	..	..	97,008	..	97,008
Sorghum . . . . .	7,100	14,089	36,547	1,833	59,569
Wheat . . . . .	4,313	5,712	138,338	905	149,268
Lucerne . . . . .	82,890	1,166	60,353	2,382	146,791
Cotton . . . . .	740	28,409	27,513	..	56,662
Fruit and Vines . . . . .	17,928	31,985	3,303	1,863	55,079
Tobacco . . . . .	2,221	294	203	21	2,739
Vegetables . . . . .	26,033	5,742	1,545	1,318	34,638
Other crops(a) . . . . .	4,455	3,763	15,257	249	23,724
Total crops . . . . .	164,402	109,347	414,019	9,765	697,533
Pastures . . . . .	65,457	8,974	642,292	11,198	727,921

(a) Includes fodder crops.

**Irrigation areas**

**Murrumbidgee.** This area, which consists of Yanco and Mirrool Irrigation Area, together with adjacent lands supplied under agreement, received 376,765 acre feet, nearly 16 per cent of the total water (2,408,912 acre feet) used within the State for stock, domestic and irrigation purposes. The area is served by the Burrinjuck Dam on the Murrumbidgee River and Blowering Dam on the Tumut River, which joins the Murrumbidgee River near Gundagai. The catchment of the Burrinjuck Dam is about 5,000 square miles and water storage in Blowering Dam is from the natural flow of the Tumut River and water released into that river from the Snowy-Tumut Development Section of the Snowy Mountains Hydro-electric Scheme. This includes water from the Eucumbene, Upper Murrumbidgee, Tooma and Upper Tumut Rivers. The dams also provide town supplies for Gundagai, Wagga, Narrandera, Hay, Balranald, and for towns served by the South-West Tablelands scheme.

Domestic and stock water and water for irrigation are supplied to the Irrigation Districts of Tabbita, Benerembah and Wah Wah, and the Flood Control and Irrigation District of Lowbidgee. Flood flows are relied on to serve the Lowbidgee district, and water is not released from the dams for that purpose. For other areas and districts, however, water is stored during the winter, fed by melting snows and spring freshets, and is released during the September-May irrigation season. To supply the Yanco and Mirrool Areas, water is diverted by Berembed Weir, into the main canal which has an off-take capacity of 1,600 cubic feet a second. The main canal has been completed to beyond Griffith, a distance of approximately 96 miles. These areas are served by approximately 797 miles of supply channels and pipes and 880 miles of drainage channels. In addition, approximately 444 miles of supply channel run through the Tabbita, Benerembah and Wah Wah District which are adjacent to the Areas.

The Water Conservation and Irrigation Commission controls land transactions and water supplies for the Murrumbidgee Irrigation Areas only, and has no jurisdiction over land transactions in the adjacent irrigation districts, although it is responsible for the operation and maintenance of the water supply in these areas. Other local government services, including electricity and town water supply, are provided by Councils. Land is disposed of by the Commission by purchase or under perpetual lease tenure or leased for short terms for grazing or cultivation. The area under occupation at 30 June 1970 was 400,402 acres including 31,587 acres held for short lease grazing, agriculture, etc.

The land on which the Murrumbidgee Irrigation Areas and associated districts are situated originally comprised large sheep stations and was sparsely populated, but at 30 June 1970 its population was approximately 32,500, that of Leeton Shire being 11,500 and that of Wade Shire, 21,000. The principal products of the Murrumbidgee Irrigation Areas are wool, livestock for slaughtering, rice, citrus fruits, peaches and nectarines, grapes, tomatoes, peas, beans, and root vegetables. Rice growing was initiated on the Areas in 1924 and has since become the most important crop. In a normal season, the water supplied for rice represents about half the total delivered to the Areas.

*Other Irrigation Areas.* The Coomealla, Tullakool, Buronga, Mallee Cliffs, Hay, Curlwaa, and Coleambally Irrigation Areas follow the same administrative pattern as the Murrumbidgee Areas—that is, land transactions are administered by the Water Conservation and Irrigation Commission which is responsible also for the operation and maintenance of works to supply water.

### **Irrigation districts**

These districts are set up under the Water Act, 1912–1955 for (a) domestic and stock water supply and (b) irrigation. The essential difference between an 'Area' and a 'District' is that in the case of the former, all the land to be included in the area is acquired by the Crown and then subdivided into such number of separate holdings as may be determined. Within the District, however, existing ownership of land is not disturbed other than to acquire land required for water distribution works.

Since the completion of the Hume Reservoir, several such districts have been established along the Murray to utilise the New South Wales share of the storage. Water is not available for the whole of the 5,000,000 acres adjacent to the Murray in New South Wales, and therefore the schemes are based on 'extensive' irrigation, that is, water rights are allotted to holdings on the basis that only a portion of each holding (one acre in three, five or ten, according to the district, etc.) will be irrigated, but additional water, when available, may be obtained by landholders. 'Water right' means right to such a quantity annually of water, 12 inches deep, as will cover an area of one acre.

Water to serve Berriquin, Deniboota and Deninein Districts is diverted from the River Murray at Yarrowonga into the Mulwala Canal. Water for the Wakool Irrigation District and the Tullakool Irrigation Area is diverted from the Edward River at Stevens Weir, and a supplementary supply is also obtainable from Mulwala Canal. The total length of completed canals and channels in Berriquin District is 1,033 miles, comprising Mulwala canal 75 miles, Berrigan channel 22 miles, subsidiary channels 820 miles, escape channels 105 miles, and cross drainage channels 10 miles. Off-take capacity of the Mulwala canal is 5,000 acre feet a day. Wakool, with 427 miles of channels, contains 324 holdings, and the area developed by irrigation includes about one acre in six of the total area. Sheep raising and rice growing are the main industries. Considerable subdivision has occurred within the Berriquin District, and the proportion of the total area developed for irrigation is higher than in the case of Wakool. Sheep (including fat lambs), dairying, wheat, and rice growing are the main industries.

### **Water Trust Districts, Irrigation Trusts and Flood Control and Irrigation Districts**

The Water Act, 1912–1966 provides for the constitution of Trust Districts for domestic and stock water and irrigation, and empowers the Commission to construct, acquire or utilise necessary works. When the works are completed, they are handed over to trustees to administer. The trustees are elected by the occupiers of the land and act with a representative of the Commission. They are empowered to levy and collect rates covering the cost of the works repayable to the Crown by instalments and also the cost of operation and maintenance of the works. The rates are struck according to the area of land which benefits. The following are the water trusts, other than irrigation, as at present constituted (the area in acres of each district being shown in parenthesis): *Murray River*—Little Merran Creek (157,440), Bullatale Creek (68,320), Poon Boon (34,300), Minnie Bend Flood Prevention (2,190); *Murrumbidgee River*—Yanco, Colombo and Billabong Creeks (1,007,780); *Lachlan River*—Marrowie Creek (292,640), Torriganny, Muggabah and Merrimajeel Creeks (170,240), Ulonga (64,960), Micabil Weir (11,500), Condobolin West Weir (4,480); *Miscellaneous*—Great Anabranche of Darling River (959,184), Nidgery Weir (46,880) and Algudgerie Creek (9,760)—making in all a total area of 2,829,674 acres. Twelve of these trusts have been formed for the provision of water for domestic and stock purposes and one for flood prevention.

Irrigation Trusts are established under the same Act and are administered by trustees in a similar way. There are seven of these trusts.

The Lowbidgee Provisional Flood Control and Irrigation District, the first of its kind, was constituted in 1945. Its purpose is to provide flood irrigation for pasture lands on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. Another district, Medgun, near Moree in the north-west, is also in operation.



### River, lake and farm water supplies

During recent years the numbers of licences and permits issued to individuals to draw water from rivers and lakes for irrigation have increased substantially, especially along the coastal streams in sub-humid districts where the value of supplementary irrigation is becoming more recognised as a means of stabilising production in dry months. There has also been a considerable increase along the Murrumbidgee, Lachlan, Namoi, and Macquarie Rivers.

Under the Farm Water Supplies Act, 1946, technical advice and assistance, and also financial assistance, are made available to help individual farmers and groups of farmers to provide and improve water supplies for domestic, stock and irrigation purposes by means of wells, bores, excavated tanks, weirs or dams, and flood and spray irrigation systems.

### Underground water

For information on underground water resources in New South Wales *see* Year Book No. 55 and earlier issues.

### Future programme

The programme of development in hand includes the provision of additional dams and storages, weirs, and flood mitigation and river protection works in various parts of the State. Work is continuing at Copeton Dam site on the Gwydir River, Lostock Dam on the Paterson River and Toonumbar Dam on the Iron Pot Creek, which is a tributary of the Richmond River. Legislation has been passed authorising the construction of Windamere Dam on the Cudgegong River, a dam on the Brogo River and existing legislation authorises the construction of a flood control and irrigation dam at Warkworth in the Hunter Valley. The Hunter River development, of which Glenbawn Dam is an integral part, incorporates an exceptionally fertile coastal valley, forming the hinterland to Newcastle, where the annual rainfall is not heavy and variations from month to month are considerable. The strengthening and enlargement of Wyangala Dam, on the Lachlan River, has been completed and storage capacity will be increased to 987,139 acre feet in 1971 following installation of radial gates in the spillway. Within the new Coleambally Irrigation Area further development of farms has been carried out and water is being supplied by the Coleambally Canal which off-takes from the Murrumbidgee River at Gogeldrie Weir. At 30 June 1970, 313 large area farms and 22 horticultural farms had been allotted.

## Victoria

Particulars of the rainfall pattern of Victoria were given on page 1117 of Year Book No. 37. (*See also* the chapter Physical Geography and Climate of this issue.)

### Administration

Victorian Governments have been active in the development of country water supplies since the 1860's when major works to supply the Bendigo goldfields were undertaken. Local trusts to construct and operate waterworks under Government supervision were provided for in the *Water Conservation Act* 1881. Development under the trust system was greatly stimulated by the *Irrigation Act* 1886, which provided for the construction of national headworks by the State, and vested in the Crown the right to the use and control of all surface waters. By 1900 there were 33 irrigation trusts and 18 other rural water supply trusts, but the system of local control was then breaking down under financial difficulties.

The *Water Act* 1905 established the State Rivers and Water Supply Commission to take over the Irrigation Trust districts (except the still-existing First Mildura Irrigation Trust) and to exercise the State's functions in the further control and development of surface waters outside the metropolis. The Commission now supervises all private diversions from streams and directly administers irrigation districts covering 2,236,688 acres, rural waterworks and urban districts covering 12,086,800 acres, flood protection districts covering 149,000 acres, and urban water supplies serving 248,220 people. It also supervises the activities of local urban water supply authorities supplying 678,060 people in 259 towns, as well as 101 local sewerage authorities and 31 river improvement and drainage authorities.

### Works summarised

Since the State Rivers and Water Supply Commission began its operations in 1906 the capacity of storages under its control has been increased from 172,000 acre feet to 4,694,120 acre feet. In addition, Victoria has in effect a half share in River Murray Commission storages totalling 2,703,150 acre feet, bringing total capacity available to Victoria at 30 June 1970, to 6,045,690 acre feet. Most of



the water used from these storages is for irrigation. The area irrigated in 1969-70 totalled 1,389,012 acres (compared with 105,000 acres in 1906). Irrigation deliveries in 1969-70 totalled 2,091,702 acre feet. The value of irrigation production in 1968-69 was estimated at \$174,500,000. Of the total irrigation production about one-quarter was from lands irrigated by 'private diverters', i.e. irrigators who are authorised to take water from streams, lakes, etc., but who do not come within the boundaries of an irrigation district.

### Storages

Capacities of principal storages (in acre feet) and system totals at 30 June 1970 were as follows:

*Goulburn System*—Eildon, 2,750,000; Waranga, 333,400; total, 3,130,650;

*Murray System*—half share of Murray storages, 1,351,570; total, 1,392,430;

*Ovens System*—Lake Buffalo, 19,500; total, 19,500;

*Loddon System*—Cairn Curran, 120,600; Tullaroop, 60,000; Kerang Lakes, 57,700; total, 276,250;

*Campaspe-Coliban System*—Eppalock, 252,860; Coliban storages, 64,930; total, 317,790;

*Wimmera-Mallee Systems*—Rocklands, 272,000; Toolondo, 86,000; Bellfield, 63,680; total, 627,890;

*Maffra-Sale System*—Glenmaggie, 154,300; total, 154,340;

*Werribee-Bacchus Marsh*—total, 48,300;

*Mornington Peninsula*—total, 38,340.

### Irrigated culture

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1969-70 season.

AREA OF LAND UNDER IRRIGATED CULTURE: VICTORIA, 1969-70  
(Acres)

	Methods of irrigation				Total area
	Spray	Furrow	Flood	Multiple methods	
<b>Crops—</b>					
Cereals . . . . .	607	767	18,175	..	19,549
Orchards . . . . .	14,533	19,003	15,140	4,821	53,497
Vineyards . . . . .	3,012	40,305	2,216	925	46,458
Vegetables . . . . .	35,655	8,350	1,897	854	46,756
Other crops(a) . . . . .	26,331	3,672	32,774	411	63,188
<i>Total crops</i> . . . . .	80,138	72,097	70,202	7,011	229,448
<b>Pastures</b> . . . . .	45,508	6,842	1,177,101	9,068	1,238,519

(a) Includes fodder crops.

### Irrigation systems

*Goulburn-Campaspe-Loddon.* The principal storage for Goulburn waters is Lake Eildon, which was completed in 1956, submerging the original 306,000 acre feet Eildon storage completed in 1927. For the distribution of additional supplies available from Eildon and from other storages on the Loddon and Campaspe rivers it has been necessary to undertake major enlargements in the distribution system by a long-term programme of channel works which is still in progress. Deliveries during 1969-70 amounted to 920,721 acre feet, compared with 395,000 acre feet in 1954-55. Goulburn River water is diverted to the irrigation areas by gravitation from the pool formed by the Goulburn Weir, near Nagambie, completed in 1890 as a State work. The East Goulburn main channel of 1,000 cusecs capacity supplies the areas around Shepparton. Two 1,500 cusec channels to the west convey water to the off-river Waranga Reservoir and supply part of the Rodney area through off-takes on the way. From Waranga Reservoir there are two main outlets, one supplying the western part of the Rodney area and the other, of 1,200 cusecs capacity, supplying the Waranga Western Main Channel, which runs 230 channel miles west across the Campaspe and Loddon Valleys to beyond Birchip.

Flows in the Waranga Western Main Channel are augmented by the injection of Campaspe water through a pumping station of 200 cusecs capacity near Rochester. Supply to the Tragowel and Boort areas is augmented by gravitational diversion of Loddon water.

The gross area of holdings in the Goulburn-Campaspe-Loddon systems is 1,327,070 acres. The main products are dairy produce, fruit, wool, and fat lambs. Annual production of deciduous canning fruits in the eastern part of the system is about two-thirds of Australia's total.

*Murray River system.* Water is diverted from the Murray by gravity at the Yarrowonga Weir for the Murray Valley Irrigation Area and at the Torrumbarry Weir for the Torrumbarry irrigation system which extends to Swan Hill. Holdings in the Murray Valley area total 301,691 acres, devoted mainly to dairying, fat lambs and canning fruit. Holdings in the Torrumbarry system total 386,439 acres, devoted mainly to dairying and the production of fat lambs, with a concentration of vineyards, orchards and market gardens around Swan Hill.

Downstream from Swan Hill there are 5 districts supplied by pumping: the district of the First Mildura Irrigation Trust and the 4 Commission districts of Nyah, Robinvale, Red Cliffs, and Merbein. These districts together serve 74,781 acres, producing mainly dried vine fruits, with some citrus fruits and table and wine grapes.

*Southern systems.* The Macalister district, covering 130,476 acres around Maffra and Sale, is supplied from the Macalister River, regulated by Lake Glenmaggie, and from the unregulated flow of the Thomson River. Dairy farming is the principal activity. The Bacchus Marsh and Werribee Districts, supplied from storages in the Werribee River only 20 miles west of Melbourne, cover 16,231 acres intensively developed for dairying and vegetables.

#### **Wimmera-Mallee domestic and stock supply system**

Storages in the Grampians in south-west Victoria ensure farm water supplies over an area of 11,000 square miles extending northward through riverless pastoral and cereal lands to the Murray. Farm dams throughout this region, which covers one-eighth of the total area of the State, are filled once each year, in the winter-spring season, through the medium of 6,600 miles of Commission channels and about 4,000 miles of private channels. Without this supply, occupation of the region would be extremely hazardous. Storage capacity has now been increased from 564,210 acre feet to 627,890 acre feet by construction of Lake Bellfield. Fifty towns, with a population of 46,000, receive their supply from the same system. Near Horsham and Murtoa, close to headworks in the south, a supply is maintained for the irrigation of an area of 7,500 acres, mainly for dairying.

#### **Drainage, flood protection and river improvement**

The largest work in this category undertaken by the State Rivers and Water Supply Commission is the Koo-wee-rup-Cardinia flood protection district embracing 89,245 acres of a continuous depression along the seaboard of Westernport. Once useless, indeed a hindrance to communication, this area now yields primary products worth several million dollars each year.

By the *River Improvement Act* 1948, the formation of local river improvement and drainage trusts under the supervision of the Commission has been greatly facilitated and since 1950, 29 such trusts have been formed (including the Dandenong Valley Authority). The importance of river improvement work is expected to continue to grow.

The Dandenong Valley Authority was created in 1963 by special legislation, with jurisdiction over the whole catchment of the Dandenong Creek (300 square miles) for purposes of arterial drainage, river improvement and flood protection. In June 1966 the Authority took over the Commission's Carrum Drainage District.

#### **Finance**

The net capital liability of the Commission at 30 June 1970 for works under its direct control was \$318.1 million. Eighty-eight per cent of the cost of capital and interest repayments was borne by the State. Total expenditure on irrigation was \$172.1 million; \$24.2 million on rural, domestic and stock supplies; \$48.8 million on urban supplies and \$2.4 million on flood protection. A further \$36.8 million (relating mainly to irrigation) was expended on headworks but has not yet been allocated to the above. The remaining \$33.8 million was for expenditure on storages for private diversion and to supplement supplies to local authorities (\$11.2 million), and items such as loan floatation expenses, miscellaneous surveys and investigations, and buildings, plant and stores.

### Future programme

In July 1963 the Government announced plans for a long-term storage programme for irrigation purposes to cost a total of \$75 million between 1963-64 and 1973-74. This included the projected Chowilla Reservoir referred to on page 846. Another of the storages is Lake Buffalo (second stage) which appears in the list of dams and reservoirs projected in the table on page 841.

Since the long-term storage programme came into operation, new storages have been completed for the Wimmera-Mallee System (Lake Bellfield, near Horsham); the Mornington Peninsula System (Devilbend Reservoir and Tarago Reservoir); the Goulburn-Murray System (Corop Lakes) and private diverters near Benalla (Lake Nillahcootie); and along the Buffalo River (Lake Buffalo, first stage).

At present work is proceeding on new storages and associated works to supplement supply to the Bacchus Marsh-Werribee System (Lake Merrimu) and the Goulburn-Murray System (Lake Mokoan, near Benalla). During 1970 a start was made on construction of the Tandarra-Calivil Pondage north of Bendigo and preparations were completed for construction of Rosslynne Reservoir near Gisborne.

Lake William Hovell at present being constructed on the King River under a grant of \$4 million from the Commonwealth Government will supplement supply to irrigators along the King Valley.

Works expenditure of about \$4,000,000 per year is carried out from about twenty-six operating centres throughout the State. In addition, four major construction centres have been spending about \$2,500,000 annually for many years on a programme of channel and drainage works in the Goulburn-Murray System, and the end of this programme is not yet in sight.

A major new development has been a grant of \$3,600,000 from the Commonwealth Government to finance a scheme to reduce the flow of saline drainage water into the River Murray. Works for the diversion of saline drainage at Kerang and Sunraysia were brought into operation.

About 390 miles of pipelines will replace earthen channels in the new \$2.5 million Millewa scheme situated west of Sunraysia.

Details of a projected storage on the Mitta Mitta River at Dartmouth in North-Eastern Victoria appear on page 841.

## Queensland

Particulars of the rainfall pattern of Queensland are given in Year Book No. 37, page 1122. (*See also* the chapter Physical Geography and Climate of this issue.)

### Administration

In Queensland the right to the use and flow of non-tidal surface water contained in, or flowing through or past, the land of two or more occupiers, and all artesian and sub-artesian water vests in the Crown. Subject to certain reservations for local authority and other purposes, such water is controlled by a Commissioner of Irrigation and Water Supply. Private diversions from watercourses, artesian wells and, in certain declared areas, sub-artesian wells, are subject to licence by the Commissioner. Dams and weirs are constructed by the Commissioner to safeguard supplies in streams from which private pumping for irrigation takes place, and also to provide water for irrigation areas established by the Commissioner. For a description of the development of the present administration *see* Year Book No. 42 and earlier issues.

### Irrigation—extent, systems and methods

Queensland sugar cane represents in value about 40 per cent of the agricultural production of the State. In 1969-70, 24 per cent of the sugar cane acreage was irrigated, representing 35 per cent of the total area irrigated in the State. Tobacco is another major crop, and the area irrigated during 1969-70 represented 97 per cent of the total plantings. Irrigation of grain crops has increased considerably in recent years and 21 per cent of the crops are now being irrigated.

Most irrigation in Queensland is undertaken by farmers operating under licence to obtain water by pumping from streams or from natural underground storages. Over half the total area irrigated in Queensland is supplied from underground water. The main areas where these supplies have been developed extensively are the Burdekin Delta (Ayr-Home Hill area), the Pioneer Valley, Callide Valley, Lower Burnett (Bundaberg area), Lockyer Valley, Darling Downs, and Redland Bay.

Furrow irrigation is used for cotton, sugar cane, some tobacco, and miscellaneous row crops. Spray irrigation is used widely on fruit, vegetables, fodder crops, sugar cane, and the major part of the tobacco crop. Irrigation is required around-the-year for most of Queensland, as the timing and duration of the summer 'wet' season are too variable to enable a definite non-irrigation season to be fixed, as can be done in southern States.



**Irrigated culture**

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1969-70 season.

**AREA OF LAND UNDER IRRIGATED CULTURE: QUEENSLAND, 1969-70**  
(Acres)

	<i>Method of irrigation</i>				<i>Total area</i>
	<i>Spray</i>	<i>Furrow</i>	<i>Flood</i>	<i>Multiple methods</i>	
<b>Crops—</b>					
Cereals . . . . .	29,255	31,622	8,521	4,717	74,115
Cotton . . . . .	1,035	8,479	344	524	10,382
Fruit . . . . .	9,923	430	215	486	11,054
Sugar cane . . . . .	52,420	75,238	11,278	12,322	151,258
Tobacco . . . . .	11,710	313	282	163	12,468
Vegetables . . . . .	41,387	3,564	262	454	45,667
Other crops(a) . . . . .	64,430	9,752	4,758	545	79,485
<i>Total crops</i> . . . . .	<i>210,160</i>	<i>129,398</i>	<i>25,660</i>	<i>19,211</i>	<i>384,429</i>
Pastures . . . . .	32,805	872	13,884	756	48,317

(a) Includes fodder crops.

**Areas under private irrigation**

In six important areas irrigation has been developed by private pumping. In the Lockyer Valley, thirty miles west of Brisbane, more than a third of an estimated total irrigable area of 60,000 acres is under irrigation. The valley comprises an extensive flood plain where heavy black alluvial soil thickly overlies gravels and sands carrying water suitable for irrigation, which is necessary for continuous agricultural production. A number of small weirs on Lockyer Creek with a total storage of 1,340 acre feet and Atkinson Dam, an off-stream storage, have been constructed by the Irrigation and Water Supply Commission. The latter dam provides a regulated supply of water in Buaraba Creek and along the lower end of Lockyer Creek. The Lockyer Valley produces a substantial proportion of Queensland's onions, potatoes, pumpkins, lucerne, hay, green fodder, maize and dairy products.

The Darling Downs area west of Toowoomba is extensively irrigated from both surface and underground sources. Approximately 66,000 acres are under irrigation, of which 47,000 acres are supplied from underground sources and 6,000 acres are supplied from the sections of Sandy Creek and the Condamine River regulated by Leslie Dam (*see* page 857). Cereal, fodder, cotton and oil seed crops comprise a large proportion of the irrigated production in this region.

The Callide Valley in central Queensland is an important source of grain, dairy products, fodder, and cotton and is largely dependent on irrigation from underground water resources. Some 12,970 acres are now irrigated from underground supplies. The broad expanses of alluvium in the Pioneer Valley near Mackay have been extensively developed for cane production. The area under irrigation from groundwater and surface supplies in the vicinity of Mackay is some 15,470 acres. The lands in the vicinity of Bundaberg are cultivated for sugar cane production and over 47,300 acres are irrigated from surface and underground supplies.

The other important area is the fertile delta region of the Burdekin River, where the irrigated area is over 72,900 acres. The delta has ground water supplies at shallow depth, and these have been tapped to obtain supplies in the dry periods of the year. Sugar is the main crop irrigated. Schemes to replenish the subterranean water supplies in the Burdekin Delta by pumping from the Burdekin River are in operation under the control of the North and South Burdekin Water Boards.

**Government irrigation areas and projects**

The Irrigation and Water Supply Commission has constructed and/or operates nine dams and forty-eight weirs with a storage capacity of 930,131 acre feet. Water from these storages supplies the following four irrigation areas operated by the Commission and regulates numerous streams from which pumping for private irrigation takes place.



*Mareeba-Dimbulah Irrigation Area.* In 1952 an irrigation undertaking was established to assist tobacco production in the valleys of the Walsh and Barron Rivers. Tinaroo Falls Dam on the Barron River (330,000 acre feet) was completed in 1958, and construction of irrigation works is continuing. Irrigation water from the dam is being supplied through 211 miles of channels to 557 farms in the area. Tinaroo Falls Dam is also providing a regulated flow of water in Barron River at Kuranda for the generation of hydro-electric power at Barron Falls.

*Burdekin River Irrigation Area.* The first stage of the Burdekin River Irrigation Area, comprising the Clare-Millaroo and Dalbeg sections, has been completed. Located from twenty-five to sixty-five miles from the mouth of the Burdekin, these areas comprise 18,862 acres and obtain water from central pumping stations drawing from the river. Two storages of 7,670 acre feet and 2,550 acre feet capacity have been constructed further upstream to supplement flow. Sugar cane production predominates in the area with rice and seed beans as the main second crops. Additional water for the region is now available from the recently completed Eungella Dam on the Broken River.

*Dawson Valley Irrigation Area.* A scheme for the development of the Dawson Valley providing for the irrigation of 70,000 acres was inaugurated in 1923, but work was discontinued after three weirs had been built in this area. Their total storage is 10,280 acre feet, and at present sixty-one farms (4,894 acres) are in production. Cotton and grain account for the major part of the production from irrigated areas. Construction of a further weir on the Dawson River, which will provide an additional 14,000 acre feet of storage, is currently in hand.

*St George Irrigation Area.* This area comprises twenty farms, on which some 9,800 acres were irrigated during 1969-70 from a weir on the Balonne River (8,220 acre feet), and from a further two recently constructed weirs with a combined capacity of 7,350 acre feet. These two weirs also form part of the new major supply system. Cotton, grain, fodder, wool and fat lambs are the main products. Construction is in progress on a major storage, the E. J. Beardmore Dam of 81,000 acre feet capacity, and irrigation and other works to serve a further twenty-two farms.

The following two irrigation areas are being developed with Commonwealth assistance.

*Emerald Irrigation Area.* Formal approval for the establishment of the Emerald Irrigation Area was given on 28 March 1968, following agreement by the Commonwealth Government to make a non-reimbursable grant of up to \$20,000,000 available for the construction of the dam. The project involves the construction of Fairbairn Dam on the Nogo River with a capacity of 1,170,000 acre feet and the construction of irrigation, drainage, road and other works to serve some 130 irrigation farms on which up to 49,000 acres could be irrigated annually. Construction of Fairbairn Dam is in progress and is expected to be completed by 1972.

*Bundaberg Irrigation Area.* This area was formally established on 5 November 1970, following agreement by the Commonwealth Government to provide a \$12.8 million non-reimbursable grant for construction of Monduran Dam and the Gin Gin Main Channel. The purpose of the scheme is to stabilise sugar cane production on the 1,600 farms in the area, which have suffered shortfalls in recent years owing to drought and consequent depletion of underground supplies. It is being constructed in two stages. Phase one of the first stage is now under construction and includes Monduran Dam, Gin Gin Channel and irrigation works to supply farms in four areas.

*Miscellaneous Irrigation Projects.* Additional projects which have been completed since 1961 or for which construction work has commenced include the following: Moogerah Dam (Warrill Valley Project) on Reynolds Creek (75,000 acre feet) permits irrigation of some 7,000 acres of the Warrill Valley, and provides water for the thermal power station at Swanbank, near Ipswich. Borumba Dam (Mary Valley Project) on Yabba Creek (34,500 acre feet) supplies the town of Gympie and will allow extension of the area irrigated from the Mary River to about 18,000 acres. Callide Dam (37,800 acre feet) on Callide Creek, nine miles upstream from Biloela, provides cooling water for the Calcap power station and compensation water for maintenance of underground supplies along Callide Creek. Leslie Dam (Upper Condamine Project), on Sandy Creek, has an initial capacity of 38,200 acre feet, with provision for later increase to 87,000 acre feet. Water from the dam is available for irrigation along the Condamine River as far as Cecil Plains and for a supply to the city of Warwick. Coolmunda Dam (Macintyre Brook Project) has a capacity of 61,000 acre feet, and provides irrigation water for up to 8,000 acres along Macintyre Brook. Wuruma Dam (Upper Burnett Project), on the Nogo River, has a storage capacity of 157,000 acre feet for irrigation of 11,000 acres along 100 miles of the Burnett River. Eungella Dam (Bowen-Broken Project), on the Broken River, has a storage capacity of 106,000 acre feet and provides cooling water for the Collinsville power station, water for Collinsville town, and 4,000 acre feet per annum for mining development at Goonyella. In addition, the dam will safeguard supplies of irrigation water to the Burdekin River Irrigation Area and private diversers along the Bowen and Lower Burdekin rivers. Bedford Weir (storage capacity 5,200 acre feet), situated on the Mackenzie River some 15 miles north of Blackwater provides an assured supply of water for mineral development and urban requirement in the Blackwater area. Atkinson Dam

(capacity 25,400 acre feet), provides irrigation water to 3,100 acres on 131 holdings in the Lower Lockyer Valley. Construction is continuing on Maroon Dam (31,000 acre feet) on Burnett Creek, which will supply irrigation water along the Logan River. The development of rivers constituting portion of the Queensland-New South Wales border, under the authority of the Dumaresq-Barwon Border Rivers Commission, is described on page 847.

### Rural Water Supply Areas

Although provisions existed in the Water Acts for many years for the constitution of rural water supply Areas and Boards, little advantage was taken of these powers until 1964 when an amendment of the Acts extended the purposes for which these Areas and Boards may be constituted and the methods of rating and financing of works, and provided for resumption or acquisition of lands by such Boards. This form of water supply is being sought increasingly by groups of landholders in various parts of Queensland to provide a reasonably economical measure of permanent supply for stockwatering, dairy and domestic purposes in areas prone to drought, and thus achieve a permanent form of drought relief. Usually the capital cost of works is met by a 50 per cent subsidy by the Government and the balance by a Board borrowing by Government guaranteed loan on the security of debentures.

At 30 June 1970 thirteen Rural Water Supply Areas were operating, supplying 549 rural holdings covering 261,280 acres and reticulated by 311 miles of pipelines.

Water conservation, irrigation and drainage schemes may also be carried out under these Acts. One group irrigation scheme near Brookstead is now in operation and three group drainage schemes have been approved. Further group drainage schemes are currently under investigation.

### Underground water

For information on underground water resources in Queensland *see* Year Book No. 55 and earlier issues.

### Stock watering

A predominant interest in the field of water conservation has been the provision of stock and domestic water supplies in Queensland's great pastoral areas, which contain more than a third of the Commonwealth's cattle and about an eighth of the sheep. In addition to the stabilisation of water supplies in the pastoral areas, the provision of water along stock routes for travelling stock has received much attention in recent years.

At 30 June 1970, there were 874 facilities throughout the State and in addition, at that time, there were 15 facilities under construction and 9 under investigation.

Since 1935, the Queensland Irrigation and Water Supply Commission has acted as consultant and constructing authority to the Stock Routes Co-ordinating Board for watering facilities on stock routes. On completion, facilities are vested in local authorities for control and maintenance.

The two authorities mentioned above carry out a continuous investigation to ascertain general stock movements so that new facilities may be provided as required.

### Technical and financial assistance to farmers

'The Farm Water Supplies Assistance Acts, 1958 to 1965' are designed to improve the standard of water supply installations on individual holdings, encourage greater development in individual irrigation schemes, provide greater stability of production, and avoid losses in time of drought as well as generally increase production. To achieve this purpose, the Acts authorise the provision of technical and financial assistance to landowners for the investigation, design and installation of approved works of farm water supply. All projects for which finance is provided under the Acts are carried out under Commission guidance, and for the payment of a small charge the Commission will advise on the construction of works designed by its staff, but for which the landowners do not require financial assistance under the Acts.

During 1969-70, 1,415 requests (1,126 for technical assistance only and 289 for technical and financial assistance) were received in addition to 728 applications for advice on ground-water supplies. An amount of \$1,248,771 was approved for advances and the amount actually advanced was \$1,003,703.

## South Australia

Brief particulars of the climatic conditions in South Australia are given on page 1129 of Year Book No. 37. (*See also* the chapter Physical Geography and Climate of this issue.)

### Administration

Water supplies, other than irrigation works, are under the control of the Engineering and Water Supply Department, which administers the Waterworks Act, 1932-1970 and Water Conservation Act, 1936, both of which empower the Minister of Works to impound or divert the water from any lake, watercourse or underground source for the purpose of establishing and maintaining public water supply schemes. The Waterworks Act, 1932-1970 governs the principal reticulated water supplies in proclaimed water districts throughout the State. A feature of these supplies is the extensive network of water mains supplying country townships and farmlands where local water resources are practically non-existent.

Under the Water Conservation Act, 1936, small dams, wells, bores, rainsheds, storages and, in some instances, minor reticulation works are provided in remote areas to assist local settlers in development and to supply travellers and travelling stock.

### Irrigation

Australian irrigation originated in the upper Murray in South Australia and the Mildura area of Victoria. South Australian irrigation commenced with an agreement between the Government and the Chaffey brothers in 1887 whereby an area of land at Renmark was made available for the establishment of certain irrigation works. In South Australia, irrigation is almost exclusively confined to the Murray Valley. Except for quantities held in various lock pools, no water from the Murray is stored in South Australia. Water is either pumped onto the land or gravitated from the river.

The two major authorities administering irrigation areas are the Department of Lands and the Renmark Irrigation Trust. The Trust is controlled by a local board of management consisting of seven members. This area differs from other South Australian irrigation areas in that the land is freehold instead of leasehold and is self-contained and self-controlled. Every settler is entitled to vote for the election of Trust members. The Trust maintains eighty miles of reticulation channels, which are being progressively replaced by underground pipelines financed by Trust revenue and State Government grants.

### Irrigated culture

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1969-70 season.

AREA OF LAND UNDER IRRIGATED CULTURE: SOUTH AUSTRALIA, 1969-70  
(Acres)

	<i>Method of irrigation</i>				<i>Total area</i>
	<i>Spray</i>	<i>Furrow</i>	<i>Flood</i>	<i>Multiple methods</i>	
Crops—					
Orchards . . . . .	23,307	9,697	313	395	33,712
Vegetables—					
Potatoes . . . . .	7,391	52	23	56	7,522
Other . . . . .	6,061	1,366	49	234	7,710
Vineyards . . . . .	7,566	26,761	452	219	34,998
Other crops(a) . . . . .	38,178	39	13,905	86	52,208
<i>Total crops</i> . . . . .	82,503	37,915	14,742	990	136,150
Pastures . . . . .	14,690	..	34,988	130	49,808

(a) Includes fodder crops.



### Water supply schemes

*Adelaide Metropolitan Water Supply.* Adelaide and surrounding areas of development including Elizabeth derive their water from nine reservoirs in the nearby Mount Lofty Ranges and by means of pumping stations and a pipeline from the Murray River at Mannum. The reservoirs have a storage capacity of 153,000 acre feet and the pipeline has a nominal capacity of 95,500 acre feet a year. A second pipeline extending from Murray Bridge to convey River Murray water to the metropolitan supply system is under construction. This pipeline will initially have a capacity of 132,200 acre feet per year. The consumption for the whole area for the year 1969-70 was 115,000 acre feet, equivalent to a consumption of 101.9 imperial gallons per head per day. The capital cost to 30 June 1970 was \$131,488,000.

*Country reticulated supplies.* Areas extending to a distance of 90 miles north of Adelaide are supplied from the Warren, Barossa and South Para Reservoirs (50,470 acre feet) in the Barossa Ranges. Supplies to these areas are supplemented by River Murray water delivered into the Warren trunk main by a pipeline extending from Swan Reach to a point near Stockwell. This pipeline has a nominal capacity of 20,200 acre feet per year. Agricultural towns and areas further north are supplied from Beetaloo, Bundaleer and Baroota Reservoirs, and the Morgan-Whyalla Pipeline. The original 223-mile pipeline from Morgan to Whyalla and a second and larger pipeline completed in 1966 are at present able to carry 53,300 acre feet of water a year from the River Murray. A large part of Eyre Peninsula is supplied, through the 240-mile Tod River Main and the 104-mile East Coast Main, with water from the Tod River Reservoir (9,196 acre feet), the sand beds of the Uley-Wanilla Basin, the Lincoln Basin, and Poldia Basin. Along the Murray River all towns are supplied from the river. Water from the river is also reticulated through adjacent farmlands for up to 30 miles, and a pipeline extended from Tailem Bend to Keith provides the means of reticulating Murray water to numerous towns and a large area of farmlands in the upper south-east. Surface and underground resources have been developed to supply most rural centres not covered by the larger schemes. Water conservation and distribution works in country districts to 30 June 1970 have cost \$148,700,000 (exclusive of river control and irrigation works on the Murray River) and contain 8,126 miles of water mains.

### Underground water

For information on underground water resources in South Australia see Year Book No. 55 and earlier issues.

### Farm water schemes

The Department of Mines gives assistance to individual farmers in the provision of supplies from underground sources, and the Department of Agriculture provides an advisory service on water conservation and irrigation designs on farms, and on the suitability of underground water for irrigation and stock purposes. In addition, a great part of the farming areas is supplied by the Engineering and Water Supply Department with water under pressure from the extensive distributions systems connected to various reservoirs and the Murray River.

### South-eastern drainage

In the south-east of South Australia it has been necessary to construct drainage schemes to dispose of surplus water from areas where a series of valleys or flats is separated by low ranges, parallel to the coastline, which prevent natural drainage. The Millicent Drainage System, completed in 1885, reclaimed 100,000 acres. The South-Eastern Drainage Area System, which is controlled by the South-Eastern Drainage Board, comprises drains constructed by the State Government at public expense, plus those undertaken by the Government in co-operation with the landholders. The area is bounded on the east by the State boundary, and on the west by the sea coast. It extends from about 55 miles north of Kingston, southerly to near Millicent and Kalangadoo. Up to 1948 about 430 miles of drains had been provided at a cost of \$1,441,752. These were of a developmental nature intended more to promote the rapid removal of floodwaters than to provide a complete system of drainage. Since 1948 the complete drainage of the Biscuit, Reedy Creek and Avenue Flats in the Western Division has been in progress. The southern section of 260,000 acres, which involved the excavation of 8,100,000 cubic yards and the provision of 343 miles of new or enlarged drains, has been completed. Work on the northern section of 140,000 acres is virtually complete with the construction of 98½ miles of drains which involved the excavation of 3,051,500 cubic yards of material. In addition, work is in hand for the drainage of 727,000 acres of land in the Eastern Division of the south-east, situated east of Bakers Range, and extending from near Kalangadoo to north of Naracoorte. Part of the first stage of this work provided for the construction of a main diversion drain (consisting of the enlargement of an existing drain for a distance of 24 miles and the excavation of 22 miles of new drain) from



Beachport to Struan. The work to date has required the excavation of 6,503,300 cubic yards of material; the total length of the diversion drain and associated relief drains is  $51\frac{1}{2}$  miles. Work is proceeding on the internal drainage of the area, and 795,380 cubic yards of excavation have been carried out in constructing  $24\frac{3}{4}$  miles of new drains and enlarging existing drains. The capital cost of drainage in the South-Eastern Drainage Area System to 30 June 1970 was \$18,231,000, and the length of drains constructed was  $869\frac{3}{4}$  miles. An extensive system of private drains (many of which are connected to the drains constructed under Government authority) also exists in the south-east of the State.

### Murray River Irrigation Areas

Where irrigation water in excess of plant requirements has been applied, perched water tables develop. Rising to the level of tree roots, these cause death of orchards from salination and water-logging. Most orchards and vineyards are now drained by plastic and tile drainage systems, thus restoring their health and productivity. Disposal of the drainage water is by pumping to basins on river flats where it evaporates, or by discharge into underlying sand and limestone aquifers. The usefulness of the latter strata is declining as they are becoming fully charged with water.

## Western Australia

Brief particulars of the climatic conditions in Western Australia are given on page 1133 of Year Book No. 37. (See also the chapter Physical Geography and Climate of this issue.)

### Administration

The Minister for Water Supply, Sewerage and Drainage administers the departmental irrigation schemes under the *Rights in Water and Irrigation Act, 1914-1964*. He is advised by an Irrigation Commission representing the local irrigationists and governmental, technical and financial branches. He also administers, under the *Country Areas Water Supply Act, 1947-1964*, the water supplies to certain country towns and reticulated farmland. As Minister for Works he controls minor non-revenue producing supplies to stock routes and a few mines and agricultural areas with their associated communities. A small number of town supplies are administered by local boards under the *Water Boards Act, 1904-1969*, which provides a large degree of autonomy with ultimate Ministerial control.

### Irrigation

Irrigation schemes have been established by the Government on the coastal plain south of Perth in the Waroona, Harvey and Collie River Irrigation Districts between Waroona and Dardanup, the water being channelled from dams in the adjacent Darling Range.

Logue Brook Dam with a capacity of 19,717 acre feet, Harvey Weir (6,495 acre feet) and Stirling Dam (46,191 acre feet) supply the Harvey Irrigation District, the rated area of which is 13,610 acres. The Harvey District links up with the Waroona Irrigation District, which is served by Waroona Dam (12,105 acre feet), Drakes Brook Dam (1,855 acre feet) and Samson Brook Dam (7,437 acre feet) and comprises a rated area of 3,060 acres. Wellington Dam on the Collie River with a capacity of 150,107 acre feet serves an area of 10,870 rated acres in the Collie River Irrigation District. Pastures for cattle comprise 89 per cent of water usage in these districts.

The recently completed Glen Mervyn Dam (1,209 acre feet) stores water for regulated release down the Preston River for irrigation of orchards and crops when the natural summer stream flow is insufficient to meet the demand.

During the past thirty-five years a centre of tropical agriculture has been developed at Carnarvon, near the mouth of the Gascoyne River. Private pumping from sands of the Gascoyne River is the principal source of irrigation water for the 158 plantations. Because of the high risk of drawing in surrounding saline ground waters by over-pumping, the usage of water by the planters is controlled strictly by the Government. The Government is developing up-river sources and delivers water by pipeline to 43 plantations in the district. Bananas for the Perth market and fruit and vegetables for the Perth and Adelaide markets are the principal crops. A tropical research station is maintained at Carnarvon by the Department of Agriculture.

A project has been embarked upon to provide water supplies for irrigation in the area traversed by the Ord River in the Kimberley Division. The project provides for the eventual development of an area of 178,000 acres of land agriculturally and topographically suitable for irrigation. The first stage, in which water was supplied to 30 farms averaging 660 acres plus a 2,400 acre pilot farm from the Bandicoot Bar Dam with a capacity of 80,000 acre feet, was completed in 1965. Cotton has been the principal crop but considerable interest is now being shown in grain sorghum.

Construction has now commenced on an earth and rock fill dam storing 4.6 million acre feet of water to serve a further area of 148,000 acres, approximately one third of which is located in the Northern Territory.

On the Liveringa flood plain, water is diverted from the Fitzroy River into a dam on Uralla Creek, which together with a natural storage of about 1,200 acre feet, provides for irrigation at Camballin 65 miles south-east of Derby. Grain and fodder sorghums are grown in the area.

#### Irrigated culture

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1969-70 season.

AREA OF LAND UNDER IRRIGATED CULTURE: WESTERN AUSTRALIA, 1969-70  
(Acres)

	Method of irrigation				Total area
	Spray	Furrow	Flood	Multiple methods	
Crops—					
Cotton . . . . .	775	6,435	..	..	7,210
Orchards . . . . .	11,251	1,036	267	582	13,136
Vegetables—					
Potatoes . . . . .	4,884	52	..	65	5,001
Other . . . . .	3,548	1,633	107	112	5,400
Vineyards . . . . .	931	248	40	16	1,235
Other crops(a) . . . . .	2,181	3,794	976	3	6,954
<i>Total crops</i> . . . . .	<i>23,570</i>	<i>13,198</i>	<i>1,390</i>	<i>778</i>	<i>38,936</i>
Pastures . . . . .	5,287	15,285	16,449	649	37,670

(a) Includes fodder crops.

#### Country water supplies controlled by Department of Public Works and Water Supply

Since 1947 enlargement and extensions of the Goldfields and Agricultural Water Supply and the development of the Great Southern Towns Water Supply have been carried out, mainly in accordance with a project known as the Modified Comprehensive Scheme. Under this scheme water has been supplied to towns and farms in an area of five million acres in mixed farming (cereal and sheep) districts of Western Australia. The modified scheme was completed in 1961 at a cost of \$20.6 million, of which the Commonwealth contributed \$10 million under the *Western Australia Grant (Water Supply) Act 1948*. A further request was made by the State Government in 1963 for a grant of \$10.5 million representing half the estimated cost of proposed extensions which would increase by 3.7 million acres the area served by the scheme. The Commonwealth agreed to provide assistance in the form of an interest-bearing loan up to a maximum of the amount requested, advances to be made during a period of eight years commencing 1965-66. Legislative authority for the loan is given by the *Western Australia (South-west Region Water Supplies) Agreement Act 1965*.

Mundaring Reservoir on the Helena River, 26 miles from Perth, is the source of water supplied to the Eastern Goldfields. It has a capacity of 62,435 acre feet and is connected to Kalgoorlie by a pipeline with extensions to towns and agricultural areas. At 30 June 1970 the Goldfields and Agricultural Water Supply was serving 109 towns and localities, and water was being reticulated to farms in an area of 5.4 million acres. The total length of pipelines was 4,268 miles and the number of services was 25,742. Consumption during 1969-70, including supplies drawn from local schemes and from the Metropolitan Water Supply, was 3,664 million gallons.

The Great Southern Towns Water Supply pipes water from Wellington Dam to towns on the Great Southern Railway from Brookton to Katanning as well as a number of other towns. At 30 June 1970 the Supply was serving 29 towns, the total length of pipelines was 690 miles, and the number of services was 9,584. Consumption during 1969-70, including supplies drawn from local sources, was 969 million gallons.

One hundred and twenty-one local schemes supply water from stream flow, dams, tanks, wells, and bores, mainly to country towns. At 30 June 1970 the total length of water mains was 1,013 miles and the number of services was 30,182.

#### Other country water supplies

As well as the schemes controlled by the Department of Public Works and Water Supply, there are four local Water Boards which draw supplies from stream flow, dams, wells, and bores. In addition, some local authorities supply water within their boundaries. The Forests Department, sawmilling companies, and mining companies operate schemes to supply water to their towns. Railways of the Commonwealth and State Governments make independent provision for supplies of water for their own purposes, although considerable additional quantities are consumed by the railways from other sources, such as those controlled by the Department of Public Works and Water Supply and the Metropolitan Water Supply, Sewerage and Drainage Board.

#### Underground water

For information on underground water resources in Western Australia *see* Year Book No. 55 and earlier issues.

### Tasmania

Brief particulars of the rainfall pattern in Tasmania are given on page 1136 of Year Book No. 37. (*See also* the chapter Physical Geography and Climate of this issue.)

#### Main purposes of water conservation and utilisation

Because of the generally more adequate rainfall in Tasmania, scarcity of water is not such a problem as it is in most mainland areas, though not all streams are permanently flowing. The only large scale conservation by reservoirs is for hydro-electric power generation, but there are some moderately sized dams built by mining and industrial interests and by municipal authorities for town water supplies. 'Run of the river' schemes are quite adequate for assured supply in many municipalities. The main supply for Hobart and adjacent municipalities originates from a 'run of the river' scheme based on the Derwent River. The river is controlled in its upper reaches by eight dams, built for hydro-electric power generation, and these tend to stabilise river flow.

Until a few years ago irrigated areas were negligible except for long established hop fields, but there is a rapidly expanding use of spray irrigation on orchards, pastures, potatoes, and beans. Until recent years there has been almost complete dependence on natural stream flows, but the need for some regulating storages has become apparent. Increasingly, farmers are constructing storages of their own, and the extension of this practice is foreseen as the logical solution in most areas, as valleys are narrow and steep sided. Single large reservoirs cannot economically serve large areas of suitable land, as nearly every valley is separated from others by pronounced hills, prohibiting the construction of cross-country channels.

Underground water suitable for stock, minor irrigation works and domestic use is exploited in the consolidated rocks of southern, midlands and north-western Tasmania. In the south and midlands nearly all groundwater is obtained from Permian and Triassic rocks. In the north-west, water is recovered from a variety of rocks ranging from Precambrian dolomites, quartzites and schists to Tertiary basalts and Quaternary sands. The highest yields are obtained from the dolomites and the basalts. In the central north and north-east unconsolidated Tertiary clays and gravels yield water of variable quality, and in some coastal areas, notably King and Flinders Islands, water is obtained from Aeolian sands.

The Mines Department is charged with the investigation of underground water resources and is currently drilling in the Longford (central north) and Scottsdale-Bridport (north-east) Tertiary areas, and is also examining the prospects of coastal sand supplies on the East Coast. There is a great reserve of untapped permanent streams in the western half of the State, which is largely unsettled. The State's largest rivers discharge in the west, but diversion to the eastern half of the watersheds is not regarded as practicable.

#### Administration

In Tasmania, water supply was once exclusively the responsibility of local government authorities, but two statutory authorities, the Metropolitan Water Board and the Rivers and Water Supply Commission, now operate bulk supply schemes, piping water for distribution by the local government authorities in the Hobart and Launceston regions, and directly to certain industrial consumers.



*Metropolitan Water Board.* The overall control of the supply of water to the cities of Hobart and Glenorchy and the municipalities of Kingborough and Clarence is vested in the Metropolitan Water Board, the local government authorities retaining primary responsibility for reticulation and sale to consumers. Water is also supplied by the Board to urban areas in the Sorell, New Norfolk and Brighton municipalities. The major source of water is the River Derwent at Lawitta, where two pumping stations are installed. The Metropolitan Water Board controls two schemes, the West Derwent Water Supply and the Southern Regional Water Supply. The first was originally constructed to serve Hobart, Glenorchy, Kingborough and Clarence; the second constructed by the Rivers and Water Supply Commission, but now under the control of the Board, serves that portion of Greater Hobart situated on the eastern shore of the River Derwent. The responsibility for raising loans and debt servicing necessary to meet the capital cost of constructing and adding to the schemes rests with the Metropolitan Water Board.

*Rivers and Water Supply Commission.* The Commission is empowered by the *Water Act 1957* to take water at streams and lakes, or to issue others with licences to do so; licensing covers supply to specific industries and municipalities as well as irrigation. The Commission is concerned with drainage trusts' operations, river improvements (including repairs after flood damage), stream gauging, its own regional water schemes, and with water supply, sewerage and drainage of towns. It operates in a similar manner to the Metropolitan Water Board in controlling the water schemes serving the East Tamar region (North Esk Regional Water Supply), the West Tamar area (West Tamar Water Supply) and the Prosser River Scheme which supplies water to a sodium alginate industry at Louisville near Orford and supplements the water supply of the township of Orford. The North Esk Regional Water Supply was constructed to meet industrial requirements of the aluminium refinery and other industries at Bell Bay and to provide bulk supplies to surrounding municipalities on the eastern bank of the River Tamar. The West Tamar Water Supply was constructed primarily to meet domestic requirements of urban areas in the Beaconsfield municipality. The local government authorities retain primary responsibility for reticulation and sale to consumers, except to certain industrial users.

In municipalities not serviced by the Metropolitan Water Board or the Rivers and Water Supply Commission, the supply of water is a function of the local municipal council. Where the construction of water and sewerage schemes is beyond the financial capacity of a local government authority, or if it requires assistance to pay for water supplied from regional schemes, the Commission may make recommendations to the Minister for payment of a subsidy.

#### **Industrial water schemes**

Four principal industrial water schemes have been installed privately—for a paper mill near Lawitta on the Derwent River, for a paper mill at Burnie using water from the Emu River, for another at Wesley Vale using water from the Mersey River, and for a factory at Heybridge reticulating water from Chasm Creek. The State Government has constructed some water schemes for use primarily for industrial purposes. These include the scheme serving the aluminium refinery at Bell Bay referred to above, a storage supplementing the summer flows of the Kermadie River for use by a wood-pulping plant at Geeveston, and the Prosser River Scheme referred to above.

#### **Irrigation**

There are no State irrigation projects at present, but the Rivers and Water Supply Commission is investigating the possibility of establishing several schemes, notably in the Huon region, the Winnaleah area, and the valleys of the Jordan, Coal and Meander rivers. An irrigation scheme for the Cressy-Longford area, utilising water from the tail-race of the Hydro-Electric Commission's power station at Poatina is under construction and should be completed in 1972. The *Water Act 1957* provides for irrigation works to be undertaken by municipalities and by trusts constituted for the purpose. With the exception of the privately owned Lawrenny estate at Ouse, which is the largest single area under irrigation in the State, there are no extensive schemes utilising one common source of water supply in Tasmania. The larger portion of the area under irrigation is watered by private schemes pumping water from natural streams.



**Irrigated culture**

The following table shows details of the area of crops and pasture and the methods employed on land under irrigated culture during the 1969-70 season.

**AREA OF LAND UNDER IRRIGATED CULTURE: TASMANIA, 1969-70**  
(Acres)

	<i>Method of irrigation</i>				<i>Total area</i>
	<i>Spray</i>	<i>Furrow</i>	<i>Flood</i>	<i>Multiple methods</i>	
Crops—					
Fruit . . . . .	6,889	197	270	307	7,663
Vegetables—					
Potatoes . . . . .	5,411	3	..	4	5,418
Other . . . . .	11,715	38	..	38	11,791
Other crops(a) . . . . .	8,359	708	421	143	9,631
<i>Total crops</i> . . . . .	<i>32,374</i>	<i>946</i>	<i>691</i>	<i>492</i>	<i>34,503</i>
Pastures . . . . .	14,659	2,599	7,306	866	25,430

(a) Includes fodder crops.

**Northern Territory**

Some particulars of the climate and main topographical features of the Northern Territory are given on page 1138 of Year Book No. 37, and in this issue information on climatic conditions will be found in the chapter Physical Geography and Climate, and a brief outline of contour and physical characteristics in Chapter 2, The Territories of Australia.

**Administration**

Under the *Control of Waters Ordinance* 1938-1968 of the Northern Territory, natural waters are vested in the Crown. Where a watercourse or lake forms a boundary of any land alienated by the Crown, the beds and banks are deemed to remain the property of the Crown (except in special cases) and the diversion of water is prohibited except under prescribed conditions. The Ordinance requires that drilling for ground-water be carried out only by drillers who are registered under the Ordinance. Registered drillers are required to provide the Government with information on bores drilled including the location, depth and size of bore, strata encountered and water produced. In particular areas where stricter control is necessary the construction or use of a well or water bore without a permit can be prohibited.

Under the *Water Supplies Development Ordinance* 1960-1968 any landholder engaged in pastoral or agricultural production may seek information or advice from the Commissioner of Water Development who is appointed under the Ordinance. He may also apply for an advance towards the cost of work proposed to be carried out. The Ordinance also provides for a refund to the landholder of the cost of drilling an unsuccessful bore where the landholder had applied to the Commissioner for advice on its construction and has carried out all drilling operations in accordance with advice given.

There is a Mines and Water Resources Branch of the Northern Territory Administration under the control of a Director. The Water Resources Section of this Branch carries out systematic stream gauging, collection of data on surface and underground water supplies, planning of water use for irrigation and town water supplies and flood prevention and control. It also provides a general advisory service to the public on water resources and water conservation by providing information on the geology of the country, the prospects of obtaining ground-water, the possible location of bore sites, the method of drilling and equipping bores, information on stream flows, surveys of dam sites, the design of water supply schemes and reticulation layouts and on the chemical and bacteriological quality of water supplies.

**Underground water**

For information on underground water resources in the Northern Territory see Year Book No. 55 and earlier issues.

At 30 June 1970, 6,625 bores and wells were registered in the Northern Territory. Of these 4,115 were for pastoral use, 394 for agricultural use, 552 served town domestic water supplies, 99 were in use on mining fields, 825 were investigation bores, 418 were Government established stock route bores and 222 were classified under other uses. These include successful bores which have collapsed and bores which were unsuccessful owing to drilling difficulties, or to insufficient quantity or poor quality of underground water.

### Irrigation

There are no large water conservation projects in the Territory with the exception of the Manton Dam (12,700 acre feet), which serves Darwin with a reticulated supply. Some water is drawn from the rising main between the Manton Dam and Darwin for irrigation purposes, but the trend is for properties in this area to develop their own water supplies, either by boring or by pumping from watercourses or lakes. Additional water will be supplied to Darwin by the Darwin River Dam which was commenced in 1970. Groundwater is being pumped from McMinns Lagoon area to augment the supply.

The hydrological investigations required in the Northern Territory as part of the National Water Resources Assessment Programme are being carried out by the Mines and Water Resources Branch. A network of base gauging stations is being built and operated for this purpose and the results will help development planning as well as providing data for environmental scientists. In particular areas of development where water supply or irrigation proposals require surface water data, supplementary gauging stations are being built to obtain this information. Since the start of stream-gauging activity in the Northern Territory the Branch has established 354 gauging stations. At 30 June 1970, the Northern Territory stream-gauging network comprised 255 operating stations; of these, 169 were base stations for measuring stream flow and 86 were supplementary stations.

Agricultural activity in the Territory is not extensive, being confined to the Darwin, Adelaide River, Coomalie Creek, Daly River, Katherine River, Wickham River, Douglas River, Edith River and Alice Springs areas, with only small acreages being utilised. In the Territory 66 licences to divert water from streams were current at 30 June 1970. The total licensed area for irrigation is 5,100 acres, but the actual area irrigated is less than this. There are also a number of farms irrigated from bore supplies, particularly in the Alice Springs area. Purposes for which irrigation water is used include the growing of fruit, vegetables, crops and pastures, and also dairying and mixed farming. The Commonwealth Scientific and Industrial Research Organisation is conducting experiments on rice growing in the coastal plains of the Adelaide River.

Both the Daly and Adelaide Rivers appear to offer considerable potential for irrigation development with regulation of the rivers. Extensive investigations are being conducted into possible dam sites and areas of land suitable for irrigation in the region. Irrigation trials are in progress using water from the high-production bores in the Daly Basin. Further exploratory drilling in this area is being carried out.

Investigations have commenced into areas of the Northern Territory which may be suitable for irrigation from the main storage on the Ord River in Western Australia.

## Papua and New Guinea

Rainfall in Papua and New Guinea varies considerably from approximately 240 inches near Lindenhafen (New Britain) and 230 inches at Kikori (Papua) to about 70 inches near Marienburg (New Guinea) and 40 inches at Port Moresby (Papua). For a general description of these territories *see* Chapter 29, The Territories of Australia of this Year Book. Irrigation has not been developed on any organised basis owing to the availability of high rainfall and the nature of agricultural development.

The Territory of Papua and New Guinea is well served with large rivers deriving their water from heavy tropical rains and high mountains which rise to over 14,000 feet, but complete data regarding water resources are not available. During 1969-70 the Commonwealth Government continued to implement the policy of establishing a national network of stream-gauging stations which can be used in assessing the water resources of the Territory, while continuing to collect hydrological data for specified proposed hydro-electric projects.

The largest rivers in the Territory include the Fly (700 miles long, situated in the western division of Papua), the Sepik (700 miles), the Ramu (450 miles), the Purari (300 miles), and the Markham (110 miles). The main water conservation interest in New Guinea at present is the hydro-electric potential, which is extensive. An outline of schemes at present in operation is given in Chapter 28, Electric Power Generation and Distribution.

## CHAPTER 25

### FORESTRY

For further details on subjects dealt with in this chapter see the annual bulletins *Non-Rural Primary Industries* and (for sawmills, etc. operations) *Manufacturing Industry*.

#### Source of statistics

Statistics relating to forestry are, in general, provided by the various authorities concerned with forestry administration. Particulars of forestry activities contained in this chapter have been collected by the Statisticians of the various States, mainly from information provided by the State forestry authorities. Other information on forested areas has been provided by the Commonwealth Forestry and Timber Bureau. Statistics of timber and by-products have been compiled from the annual factory collections undertaken by the Statisticians in the several States; manufacturing industry statistics for 1969-70 are not yet available; see page 715. Figures of production of gums, resins and tanning barks have been provided by the State forestry authorities. Data of imports and exports of forest products and timber and timber products have been compiled in the Commonwealth Bureau of Census and Statistics as part of the statistics of overseas trade. The figures shown relate, in general, to years ended 30 June.

#### Forestry in Australia

##### Objects of forestry

The main object of forestry authorities is to manage the forests of the country in a manner that will provide the maximum benefits, both direct and indirect. Direct benefits include the provision of essential commercial commodities such as structural timber, pulpwood, plywood, veneers, firewood, bark products, tars, oil, and resins. Indirect benefits include protection of soil and stock from wind and exposure, regulation of stream flow, provision of recreational facilities, and aesthetic effects. Forestry also aims at improving existing forests and woodlands by properly controlled harvesting, by protection from such destructive agencies as fire and insect attack, and by inducing regeneration. The provision of a partial tree cover on denuded lands where this cover is necessary for protective purposes, and a complete cover when the land is better under forest than under any other land use, are further aims of forestry.

##### General account of forests and timbers

The area of land in Australia suitable for the production of commercial timber as a primary crop is very small in comparison with the size of the continent. Broadleaved forests (hardwoods) cover 97 per cent of the total forested area, and approximately 94 per cent of the broadleaved forest area is occupied by eucalypts.

*Eucalypts.* The genus *Eucalyptus* is remarkable in that it includes some 500 known species, ranging in size from the mighty forest giants, mountain ash (*E. regnans*) of Victoria and Tasmania, and karri (*E. diversicolor*) of Western Australia, down to the small mallee species which inhabit vast areas of the inland. The habitats range from the inland plains to the high mountain areas in the Australian Alps, and from areas with the annual rainfall as low as 10 inches to those where it is 150 inches. Of the 500 species, only about 100 are used for sawmilling, and not more than 40 of these are exploited extensively.

The better class of eucalypt forest is concentrated mainly in the higher rainfall areas such as the east coast, the highlands of southern New South Wales, Victoria and Tasmania, and the south-western corner of Western Australia. The more important species include blackbutt (*E. pilularis*), tallowwood (*E. microcorys*), flooded gum (*E. grandis*), and red mahogany (*E. resinifera*) of New South Wales and Queensland; alpine ash (*E. delegatensis*) of New South Wales, Victoria and Tasmania; mountain ash (*E. regnans*), messmate (*E. obliqua*) and blue gum (*E. bicostata*) of Victoria and Tasmania; and karri (*E. diversicolor*) of Western Australia. For height and grandeur, mountain ash and karri are unequalled among the broadleaved trees of the world and are excelled only by a few North American coniferous (softwood) species.



In the coastal regions with lower rainfall the eucalypt forests contain many durable species such as the ironbarks, grey gums and bloodwoods of the east coast, and jarrah (*E. marginata*) and tuart (*E. gomphocephala*) of Western Australia. The spotted gum (*E. maculata*) occurring in New South Wales and Queensland is another example.

Along most of the inland streams and adjacent flood-plains there are riverain forests consisting mainly of river red gum (*E. camaldulensis*), a very durable tree which has supplied large quantities of sawn timber, railway sleepers and fence posts.

Eucalypts also occur in open forest and savannah woodland formations in areas receiving a reliable rainfall of about 10 to 20 inches per annum, as on the goldfields of Western Australia where salmon gum (*E. salmonophloia*), brown mallet (*E. astringens*) and wandoo (*E. wandoo*) occur. These trees are of considerable value for firewood, as mining timbers and for fencing. Minor forest products such as sandalwood, tan bark, essential oils, etc., also come from isolated areas in this type of country, and in the more arid areas.

*Other broadleaved timbers (hardwoods).* Broadleaved genera other than *Eucalyptus* cover a comparatively small portion of the forested land in Australia; however, the areas concerned provide a great variety of timbers suitable for a multitude of uses. There are two basic types of forest containing supplies of broadleaved timbers other than eucalypts, namely, the tropical and sub-tropical rainforests of coastal Queensland and New South Wales and the temperate rainforests of southern Victoria and Tasmania, both of which yield species known collectively as rainforest or brushwood species.

The tropical and sub-tropical rainforest along the eastern coast of Australia contains a large number of different species. Tropical rainforest occurs in northern Queensland in the vicinity of Cairns and on the Atherton Tableland, providing such well-known cabinet woods as Queensland maple (*Flindersia brayleyana*), Queensland walnut (*Endiandra palmerstonii*) and the silky oaks. The sub-tropical rainforest found in southern Queensland and northern New South Wales yields the tulip oak, crab apple (*Shizomeria ovata*) and white beech (*Gmelina leichhardtii*). Coachwood (*Ceratopetalum apetalum*) and sassafras (*Doryphora sassafras*) occur in regions to the south near Dorriggo and have yielded valuable timber for many years.

Temperate rainforest which is to be seen in southern parts of Victoria and western Tasmania consists mainly of myrtle beech (*Nothofagus cunninghamii*), but produces also southern sassafras (*Atherosperma moschata*) and blackwood (*Acacia melanoxylon*).

Turpentine (*Syncarpia glomulifera*), an excellent harbour pile timber resistant to marine borer attack, and brush box (*Tristania conferta*), a superior structural and decking timber, are found in association with some eucalypts in the wetter rainfall areas on the north coast of New South Wales and in southern Queensland.

*Conifers (softwoods).* One of the most important species of native conifers is white cypress pine (*Callitris hugelii*). The main cypress pine forests of commercial value occur in New South Wales and southern Queensland west of the Great Dividing Range. The trees are comparatively small, but the timber has particular value owing to its durability including resistance to termites. It is suitable for use as scantlings, flooring, linings, weatherboards, poles, and posts. As much of the area originally covered by cypress pine has been cleared for wheat farming and grazing, the production from the remaining State forests is now strictly regulated to ensure a continuous supply.

Another important native conifer is hoop pine (*Araucaria cunninghamii*), which occurs naturally in the sub-tropical rainforest of southern Queensland and northern New South Wales associated with tulip oak, crab apple, white beech, coachwood, and sassafras. The greater part of the original hoop pine forests has been exploited, but considerable areas have been replanted to this species in Queensland and, to a lesser extent, in New South Wales.

Other native conifers which have played a useful but minor part in the Australian timber industry include bunya and kauri pines (*Araucaria bidwillii* and *Agathis palmerstonii*) of Queensland, and celery-top, Huon and King William pines (*Phyllocladus asplenifolius*, *Dacrydium franklinii* and *Athrotaxis selaginoides*) of Tasmania. Kauri pine is found in the tropical rainforest of northern Queensland in association with non-eucalypt broadleaved trees, while bunya pine occurs in the sub-tropical rainforests. In the temperate rainforests of Tasmania celery-top, Huon and King William pines are found in association with myrtle beech, southern sassafras and blackwood.

#### Extent of forested areas

Estimates prepared for the Food and Agriculture Organisation World Forest Inventory 1970, show the total area of forests plus other wooded areas as 340.4 million acres in 1970. This represents a smaller figure than the previously published result of a similar survey taken in 1965 for the Food and Agriculture Organisation which showed the total area of forests and woodlands as 599.7 million acres. The difference is largely explained by the fact that the definition of 'woodland' was changed considerably between the two reference dates.



## CLASSIFICATION OF FOREST AREA(a): AUSTRALIA

(Source: Forestry and Timber Bureau)

('000 acres)

<i>Types of forest</i>	<i>Area</i>
<b>FORESTS AND OTHER WOODED AREAS</b>	
Forests under exploitation . . . . .	65,269
Forests not under exploitation(b)—	
Excluded from exploitation by law . . . . .	4,978
Other . . . . .	23,498
<i>Total forests</i> . . . . .	93,745
Other wooded areas(c) . . . . .	246,625
<i>Total forestry and other wooded areas</i> . . . . .	340,370

## OWNERSHIP OF FORESTS

<b>Publicly-owned forests—</b>	
State forests . . . . .	41,355
Other forests . . . . .	30,270
<i>Total publicly-owned forests</i> . . . . .	71,625
Privately-owned forests . . . . .	19,412
Ownership not yet determined . . . . .	2,708
<i>Total forests</i> . . . . .	93,745

(a) Date of inventory 31 March 1970. (b) Areas of lowgrowing mallee and similar associations of woody vegetation are not included.  
(c) Includes woodlands, scrublands, etc., not regarded as forests.

## Forest reserves

The distribution of forest reserves is shown by States and Territories in the following table. Detailed comparisons between States are not possible because of the lack of uniform definitions.

## FOREST RESERVES: STATES AND TERRITORIES

31 MARCH 1970

(Source: Forestry and Timber Bureau)

('000 acres)

	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust</i>
<b>Production reserves(a)—</b>									
Productive . . . . .	7,059	4,190	9,191	246	4,068	3,439	2	31	32,352
Unproductive . . . . .		1,351	..	28	..	1,322	73	..	
Unstocked . . . . .		116	..	..	706	529	1	..	
<i>Total, production reserves</i>	7,059	5,657	9,191	274	4,774	5,290	76	31	32,352
<b>Protection reserves(b)—</b>									
Productive . . . . .	20	514	2,443	2	33	233	..	13	4,968
Unproductive . . . . .		..	..	19	51	..	1,200	97	
Unstocked . . . . .		..	..	..	28	1	314	..	
<i>Total, protection reserves</i>	20	514	2,443	21	112	234	1,514	110	4,968
All other reserves, productive, unproductive and unstocked(c)	1,031	151	..	..	..	..	(d)	..	1,182
<i>Total area, all reserves</i> . . . . .	8,110	6,322	11,634	295	4,886	5,524	1,590	141	38,502

(a) Land permanently dedicated to timber production. In the case of the A.C.T. these are 'Managed Forests'. (b) Includes flora and fauna reserves, scenic reserves, state and national parks, and water catchment areas. (c) Includes other timber reserves, land reserved for fuel supply, and vacant forested crown land. (d) Excludes aboriginal reserves totalling 29,286,000 acres which are estimated to be 90 per cent forest.

### Categories of forest reserves

- (i) *Production reserves* consist of forest lands 'permanently' reserved—by law whether Federal, State or local—for the production of logs, pulpwood, pit props, poles, posts or fuelwood for commercial purposes.
- (ii) *Protection reserves* consist of reserved lands, the management of which is principally aimed at the protection of natural resources, of fauna and flora, or at other purposes not directly related to the production of wood (e.g., parks, watersheds, soil conservation areas, etc.). Industrial cutting may or may not be allowed in these protection reserves. Industrial cutting includes the cutting of logs, pulpwood, pit props, poles, posts, fuelwood for commercial purposes. The production of logs for the production of sawnwood for local consumption is considered as industrial cutting; however, the cutting of poles and fuelwood for personal consumption on a casual or occasional basis is not considered as an industrial cutting.
- (iii) *All other reserves* consist of reserved forest lands not included above.

A considerable proportion of the permanently reserved areas is in inaccessible mountainous country, and many of the forests contain a mixture of species, only some of which are at present of commercial value. Much of the area consists of inferior forest, and a large proportion of the whole has been seriously degraded by recurrent fires.

### Plantations

The indigenous forest of Australia does not contain adequate supplies of coniferous timber, and Australia's requirements have had to be met largely by imports. As a result of the planned policy of the forest services and of several private commercial organisations, the area of coniferous plantations, mainly of exotic species, is steadily increasing. It was natural that this aspect of forestry should receive earliest attention in South Australia, as this is the State most poorly endowed with natural forest. South Australia now has a larger area of planted conifers than most other States in Australia, and for some years has been exploiting considerable quantities of timber from these plantations. Production is also increasing in the other States, and the thinnings from their plantations are already supplying a significant volume of timber.

The total production of roundwood from Australia's coniferous plantations is now more than 85 million cubic feet per annum and is expected to increase substantially during the next decade.

A special article prepared by the Forestry and Timber Bureau giving a detailed account of the history and development of coniferous plantations and of the characteristics of individual species is included in Year Book No. 44, page 975.

Broadleaved plantations (mainly *Eucalyptus* spp.) comprise a much smaller area, and the total acreage at 31 March 1969 was about 74,000 acres, about one-quarter of which was brown mallet (*E. astringens*). Plantations of this species have been established in Western Australia for tan bark production.

### AREA OF CONIFEROUS PLANTATIONS, BY TYPE OF PLANTATION

(Source: Forestry and Timber Bureau)

(Acres net)

State or Territory	Government			Private			Grand total
	<i>Pinus radiata</i>	<i>Other species</i>	Total	<i>Pinus radiata</i>	<i>Other species</i>	Total	
31 March 1970—							
New South Wales . . . . .	147,748	23,453	171,201	11,847	16,411	28,258	199,459
Victoria . . . . .	90,091	9,396	99,487	119,210	(a)1,000	120,210	219,697
Queensland . . . . .	4,085	153,681	157,766	852	38,231	39,083	196,849
South Australia . . . . .	147,208	15,027	162,235	39,668	16	39,684	201,919
Western Australia(a) . . . . .	26,123	39,171	65,294	3,325	296	3,621	68,915
Tasmania . . . . .	39,828	425	40,253	16,084	10	16,094	56,347
Northern Territory . . . . .	..	4,628	4,628	..	..	..	4,628
Australian Capital Territory . . . . .	27,997	2,748	30,745	..	..	..	30,745
<b>Australia, 31 March 1970 . . . . .</b>	<b>483,080</b>	<b>248,529</b>	<b>731,609</b>	<b>190,986</b>	<b>55,964</b>	<b>246,950</b>	<b>978,559</b>
31 March—							
1969 . . . . .	438,097	228,291	666,388	187,035	52,865	239,900	906,288
1968 . . . . .	395,215	207,176	602,391	161,326	47,224	208,550	810,941
1967 . . . . .	368,597	196,564	565,161	147,053	40,415	187,468	752,629
1966 . . . . .	342,135	184,143	526,278	139,071	36,328	175,399	701,677

(a) Estimated

### Forest administration and research

*Commonwealth Forestry and Timber Bureau.* The functions of the Commonwealth Forestry and Timber Bureau are laid down in the *Forestry and Timber Bureau Act 1930-1953* and include forestry research and education, the study of timber supply, and advice to the Government on forestry matters. The administering department is the Department of National Development.

In 1961 the Commonwealth Government expanded its activities in forestry research in Australia. The existing Forestry and Timber Bureau Divisions of Silvicultural Research and Forest Management Research were combined to form the Forest Research Institute as a separate branch of the Bureau. The purpose of the Institute is to provide complete coverage in forestry research, ensuring that all problems of primary importance to the practice and development of forestry in Australia are investigated. In developing a programme with this objective, the Institute takes account of the research activities and potential of the State forest services and other organisations. The research work carried out by the existing sections of the Forest Research Institute covers a wide range of studies, including the following: factors affecting tree growth, tree breeding, introduction of exotic species, forest nutrition, forest botany, forest entomology and pathology, fire protection, watershed management, forest mensuration, forest management and management economics, aerial inventory, biometrics, and tree seed. The Forest Research Institute maintains six regional establishments in the Commonwealth, two of which have an outstation in addition to the regional headquarters. These regional stations are run on a co-operative basis with State forest services and private forest companies or other government instrumentalities.

The Forestry and Timber Bureau also maintains a Timber Supply Economics Branch concerned with the compilation and analysis of statistics of production, consumption and trade in timber and other forest products. This Branch also carries out studies in forest economics and research into logging methods and machines. Advice on timber supply matters is currently made available to government departments and private enterprise. Research is also undertaken on matters associated with the marketing of timber products.

*Commonwealth Scientific and Industrial Research Organization, Division of Forest Products.* The Division of Forest Products was formed in 1928 to carry out investigations into Australian forest products, assist in the effective use of such products, reduce waste, reduce losses from decay and insect attack, and conduct research into the fundamental chemical, physical and mechanical properties of Australian timbers.

The research work of the Division is carried out by eight separate sections: wood and fibre structure, wood chemistry, timber physics, timber mechanics, timber preservation, timber seasoning, plywood and glueing, and timber utilisation. In addition, the Division provides assistance to individuals and local industry, administers courses of instruction on timber properties and usage, and maintains co-operative projects with several overseas authorities operating in the same field.

*Forestry in the Territories.* Forestry activities in the Territory of Papua and New Guinea are controlled by the Administration through its Department of Forests. The management of forests in the Australian Capital Territory is the responsibility of the Forestry Branch of the Department of the Interior.

The Forestry and Timber Bureau advises the Administrations of the Australian External Territories on the management of the forests in those Territories. Forests in the Northern Territory are under the control of the Forestry Branch of the Northern Territory Administration.

*Forestry activities of the States.* Forestry on State-owned lands in the various States is the responsibility of the respective State Governments, but they do not exercise any control over forestry activities on private property. The powers and functions of State forest authorities are laid down under forest Acts and Regulations. In each State there is a department or commission to control and manage State forests. Its functions include the introduction of proper measures for the control and management of forest land; the protection of forest land; the conversion, marketing and economic utilisation of forest products; the securing of an adequate and permanent reservation of State forests; and the establishment and maintenance of coniferous forests to remedy the existing deficiency of conifers in Australia. All State forest services are actively engaged on research programmes. Annual reports are issued by each State forest authority.

In addition to developing permanent forest reserves in each State, foresters are surveying all forested Crown lands with a view to obtaining dedications of new State forests to add to the permanent forest estate or to release for other uses areas unsuitable for forestry. State forest authorities control over 15 million acres of timber reserves, national parks, etc. They also usually control all timber on unoccupied Crown lands.

*Private forestry.* Privately owned lands contribute considerably to the total production from Australian forests. The most important areas of managed native forest in private ownership are the forests owned by pulp and paper companies. Schemes of financial assistance to individual land owners—designed primarily to encourage establishment and management of coniferous plantations—have been introduced by the Governments of New South Wales and Victoria.



The area of privately owned coniferous plantations is rapidly increasing, and here again the pulp and paper companies are very active. In step with the increase in afforestation programmes, the number of professional foresters employed in private forestry enterprise is increasing, while several are engaged on research.

The area of coniferous plantations established by private companies and individuals is included in the table on page 870.

#### Forestry education

The functions of the Australian Forestry School at Canberra, previously a division of the Forestry and Timber Bureau, were taken over by the Australian National University at the beginning of the 1965 academic year. The school was absorbed into the University's School of General Studies as the Department of Forestry. This department provides a full four-year training leading to the degree of B.Sc. in forestry. The University of Melbourne also maintains a School of Forestry which gives training leading to a B.Sc. degree in forestry. The Universities in all States provide facilities for post-graduate studies leading to higher degrees for forestry graduates.

The Victorian Forests Commission maintains a Forestry School at Creswick where recruits are trained, mainly for employment in the Commission.

#### The Australian Forestry Council

The Australian Forestry Council comprises the Ministers responsible for forestry in the six State Governments and the Commonwealth Ministers for National Development, Interior, and External Territories.

The Council is intended to provide the means for the mutual exchange between the State and Commonwealth Governments of information and views on forestry. It co-ordinates research into problems affecting the establishment, development, management, and fire protection of all forests, and the utilisation of forest products. It assists in co-ordinating the work of State and Commonwealth Governments and also private enterprise in the development of Australian forestry.

The Council is supported by a Standing Committee, consisting of the Director-General of the Forestry and Timber Bureau, the heads of each of the six State Forest Services, the Chief of the Division of Forest Products, C.S.I.R.O., the Secretary of the Department of the Interior and the Secretary of the Department of External Territories.

#### Fire protection

The provision of adequate fire protection is one of the main problems facing forest and rural authorities. The commercial forest area is estimated at 37 million acres with a further 39 million acres of forest not at present exploitable. The forest services maintain a high degree of protection over a relatively accessible area of about 23 million acres, about 17 million acres in the more inaccessible area receive a lesser degree of protection, and about 8 million acres are at present not protected. The remaining area of 28 million acres is mainly vacant Crown Land or is privately owned or leased, and under some degree of fire protection from the rural volunteer fire-fighting organisations or Government-financed fire protection associations.

During the 1969-70 fire season a total of 915 fires were recorded over the area of 40 million acres of forest land afforded either intensive or extensive protection. An area of 129,594 acres was burnt by these fires, which represents 0.3 per cent of the area protected.

The number of forest fires and the forest area burnt over the last ten years is shown in the following table.

NUMBER OF FIRES AND FOREST AREA BURNT 1960-61 TO 1969-70

(Source: Forestry and Timber Bureau)

Year	Protected forest areas(a)		
	Number of fires	Forest area burnt	Percentage of forest area burnt
		'000 acres	
1960-61	2,667	1,294	3.5
1961-62	1,761	297	0.8
1962-63	1,299	275	0.7
1963-64	1,494	549	1.5
1964-65	2,307	1,626	4.1
1965-66	1,865	465	1.2
1966-67	1,422	388	1.0
1967-68	1,754	754	1.9
1968-69	1,744	1,885	4.7
1969-70	915	130	0.3

(a) The area receiving protection has been taken as the 40 million acres for which State forest services provide protection.



Very intensive fire protection is afforded to the coniferous plantation area of Australia. This area is increasing rapidly and the annual planting programme is now between 60,000 and 70,000 acres. During the 1969-70 fire season a total of 149 acres were burnt, representing 0.02 per cent of the area of 874,000 acres for which fires statistics are available.

The area of coniferous plantations burnt during the past ten years is shown in the following table.

**CONIFEROUS PLANTATIONS AREA BURNT AND  
TOTAL AREA, 1960-61 TO 1969-70**

(Source: Forestry and Timber Bureau)

Year	Area burnt	Area of coniferous plantations	Percentage of coniferous area burnt
	acres	acres(a)	
1960-61 . . . .	507	452,000	0.11
1961-62 . . . .	598	472,000	0.13
1962-63 . . . .	475	492,000	0.10
1963-64 . . . .	418	515,000	0.06
1964-65 . . . .	3,130	556,000	0.56
1965-66 . . . .	1,520	610,000	0.25
1966-67 . . . .	461	660,835	0.07
1967-68 . . . .	288	729,928	0.04
1968-69 . . . .	2,247	781,000	0.29
1969-70 . . . .	149	874,000	0.02

(a) This area does not include certain privately owned coniferous forest (105,000 acres in 1969-70) for which fire statistics are not available.

Detailed information on fire protection is given in Year Book No. 55, 1969, pages 966-7.

#### Commonwealth loans to expand softwood plantations

In February 1965 the Australian Forestry Council recommended that the rate of expansion of softwood timber planting in Australia should be increased from their existing level of about 40,000 acres a year to 75,000 acres a year for the next thirty-five years. The recommendations envisaged a phased increase in the rate of Government plantings by the various State Governments up to a level of some 63,000 acres per annum together with plantings by the Commonwealth in the Territories of 2,000 acres per annum, and an average of at least 10,000 acres per annum by private forest owners. This programme would make a major contribution towards meeting Australia's future requirements for softwood products.

In February 1966 the Commonwealth Government endorsed this recommendation and agreed, as a first step towards achieving the proposed annual target of 75,000 acres, to provide financial assistance to each State, over a five-year period commencing 1 July 1966, to enable them to accelerate their rate of softwood plantings. The assistance, which is provided to the States under section 96 of the Constitution, takes the form of long-term loans repayable over twenty-five years with repayments of principal and the payment of interest commencing ten years after the date of each advance. The *Softwood Forestry Agreements Act 1967* authorised the Commonwealth to enter into agreements with each of the States to provide financial assistance by way of loans during the financial years 1966-67 to 1970-71 inclusive. Payments under the Act by the Commonwealth to all States in 1966-67 amounted to \$291,000, in 1967-68 to \$3,456,000, in 1968-69 to \$3,872,000, in 1969-70 to \$4,814,000, and in 1970-71 to \$4,748,000. It is estimated that \$4,108,000 will be provided in 1971-72.

In February 1969 the Australian Forestry Council recommended a continuation of Commonwealth financial assistance to the states for softwood timber planting for a further five-year period. The Commonwealth Government has agreed in principle to the Australian Forestry Council's recommendation and consideration is at present being given to the basis and extent of Commonwealth assistance.

### Employment in forestry

#### Persons engaged in forestry activities, 1966 census

The number of persons whose industry statements were classified to 'forestry' (excluding saw-milling) at the 1966 population census was 13,492 out of a total of 512,994 in all primary industries and 4,856,455 in the total work force. For further information see the chapter *Employment and Unemployment*, also 1966 Census Bulletin No. 9.6, *Population: by Industry and Occupational Status, Australia*.

## Employment by Forestry Departments

In the table following details are shown of the number of persons employed by State forestry departments, the Northern Territory Administration, and by the Forestry and Timber Bureau in the Australian Capital Territory at 30 June 1970.

**PERSONS EMPLOYED BY FORESTRY DEPARTMENTS  
STATES AND TERRITORIES, 30 JUNE 1970**

Occupational group	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust
Professional staff . . . . .	316	246	175	77	74	46	8	9	951
Non-professional field staff . . . . .	297	240	98	28	246	119	22	2	1,052
Clerical staff . . . . .	291	261	236	112	46	99	15	8	1,068
Extraction of timber . . . . .	(a)1,417	..	122	..	35	..	10	..	6,056
Milling of timber . . . . .		..	..	558	37	..	12	..	
Labour (forest workers, etc.) . . . . .		897	1,656	258	526	357	90	81	
<b>Total . . . . .</b>	<b>2,321</b>	<b>1,644</b>	<b>2,287</b>	<b>1,033</b>	<b>964</b>	<b>621</b>	<b>157</b>	<b>100</b>	<b>9,127</b>

(a) Excludes milling of timber.

## Employment in milling operations

Details of the average number of persons employed, including working proprietors, in sawmills during the year 1967-68 are shown in the next table. Further details regarding the operations of sawmills in 1967-68 are shown in the chapter Manufacturing Industry.

**NUMBER OF SAWMILLS AND NUMBER OF PERSONS EMPLOYED  
STATES AND TERRITORIES, 1967-68(a)**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number of sawmills . . . . .	685	442	478	86	199	274	..	8	2,172
Average number of persons employed during year—									
Males . . . . .	7,713	5,645	5,055	(b)	3,201	2,745	..	(b)	26,498
Females . . . . .	392	293	302	(b)	191	56	..	(b)	1,415
<b>Persons . . . . .</b>	<b>8,105</b>	<b>5,938</b>	<b>5,357</b>	<b>(b)</b>	<b>3,392</b>	<b>2,801</b>	<b>..</b>	<b>(b)</b>	<b>27,913</b>

(a) Statistics for 1968-69 and 1969-70 are not yet available, see page 715. (b) Not available for publication; included in Australian total.

## Forest production

## Forest products

**FOREST PRODUCTION(a): STATES AND TERRITORIES, 1969-70**

Product	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>Logs for sawing, peeling, slicing, or pulping—</b>									
Forest broadleaved . . . . . '000 cu ft	57,860	72,199	19,865	751	42,877	59,310	14	..	252,876
Brushwoods and scrubwoods . . . . .	4,422	..	8,910	..	..	..	14	..	13,347
<b>Coniferous—</b>									
Indigenous forest 'pines'—									
Cypress . . . . .	5,838	..	6,255	..	..	..	38	..	12,131
Other . . . . .	460	..	2,267	..	..	524	..	..	3,251
Plantation grown 'pines' . . . . .	11,365	19,553	5,575	28,841	2,924	2,521	..	1,760	72,538
<b>Total logs . . . . .</b>	<b>79,945</b>	<b>91,752</b>	<b>42,872</b>	<b>29,592</b>	<b>45,801</b>	<b>62,354</b>	<b>67</b>	<b>1,760</b>	<b>354,143</b>
<b>Value of logs . . . . . \$'000</b>	<b>24,395</b>	<b>24,406</b>	<b>14,994</b>	<b>7,442</b>	<b>9,044</b>	<b>15,299</b>	<b>21</b>	<b>447</b>	<b>96,048</b>
<b>Hewn and other timber (not included above)—</b>									
Firewood(b) (weight) . . . . . '000 tons	171	246	109	440	592	389	3	..	1,950
Other(c) (value) . . . . . \$'000	11,794	2,192	2,173	439	(d)1,221	204	14	17	18,053
<b>Value of hewn and other timber . . . . .</b>	<b>12,947</b>	<b>3,768</b>	<b>2,806</b>	<b>3,027</b>	<b>(d)3,988</b>	<b>(e)3,039</b>	<b>32</b>	<b>17</b>	<b>29,623</b>
<b>Other forest products(f) (total value) . . . . .</b>	<b>335</b>	<b>80</b>	<b>362</b>	<b>62</b>	<b>(g)5</b>	<b>(h)</b>	<b>..</b>	<b>..</b>	<b>843</b>
<b>Total value of forest products . . . . .</b>	<b>37,677</b>	<b>28,254</b>	<b>18,162</b>	<b>10,530</b>	<b>(i)13,632</b>	<b>18,338</b>	<b>53</b>	<b>465</b>	<b>127,110</b>

(a) Excludes some production from private land, thought to be relatively small, details of which are not available. (b) Excludes mill waste used as firewood. (c) Includes sleepers, transoms, girders, bridge timbers, mining timber, poles, piles, etc. (d) Excludes value of timber used for tannin extract, details of which are not available for publication. (e) Includes value of "Other forest products". (f) Includes charcoal (forest production only), tanning bark, essential oils, eucalyptus leaves, crude rutin, etc. (g) Excludes value of sandalwood and substitutes, details of which are not available for publication. (h) Not available for publication. (i) Includes value of timber used for tannin extract and sandalwood and substitutes.

## FOREST PRODUCTION(a): AUSTRALIA, 1965-66 TO 1969-70

Product		1965-66	1966-67	1967-68	1968-69	1969-70
Logs for sawing, peeling, slicing, or pulping—						
Forest broadleaved	'000 cu ft	252,587	249,985	253,723	254,230	252,876
Brushwoods and scrubwoods	"	14,027	12,131	12,755	13,272	13,347
Coniferous—						
Indigenous forest 'pines'—						
Cypress	"	12,487	11,402	12,179	11,374	12,131
Other	"	3,706	3,568	3,475	3,696	3,251
Plantation grown 'pines'	"	59,894	61,992	59,798	66,026	72,538
Total logs	"	342,701	339,078	341,930	348,597	354,143
Value of logs	\$'000	87,532	88,169	89,552	90,210	96,048
Hewn and other timber (not included above)—						
Firewood (b) (weight)	'000 tons	2,301	2,143	1,914	1,847	1,950
Other (c) (value)	\$'000	17,291	15,477	16,926	17,331	18,053
Value of hewn and other timber(d)	"	31,166	28,112	27,702	(e)28,057	(e)29,623
Other forest products(f) (total value)	"	782	801	851	774	843
Total value of forest products(g)	"	120,306	117,746	118,769	119,587	127,110

(a) Excludes some production from private land, thought to be relatively small, details of which are not available.  
 (b) See footnote (b) to previous table. (c) See footnotes (c) and (d) to previous table. (d) Incomplete; see footnote (d) to previous table. (e) Includes "other forest products" for Tasmania. (f) See footnotes (f) and (g) to previous table. (g) Includes value of timber used for tannin extract and sandalwood and substitutes in Western Australia.

## Value of production

While statistics of both the gross value (at principal markets) and local value (at place of production) of the forestry industry are available, particulars of the value of materials used in the process of production are not available for all States. For this reason values cannot be stated on a net basis, as has been done with most other industries. A more detailed reference to the value of production of forestry and other industries in Australia, as well as a brief explanation of the terms used, will be found in the chapter Miscellaneous.

GROSS AND LOCAL VALUE OF FORESTRY PRODUCTION: STATES AND TERRITORIES  
1965-66 TO 1969-70  
(\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
GROSS VALUE(a)									
1965-66	33,663	29,691	18,043	9,729	12,731	15,990	75	384	120,306
1966-67	31,631	29,675	17,199	8,888	13,301	16,627	73	351	117,746
1967-68	35,140	27,845	17,683	8,128	14,077	15,488	42	365	118,769
1968-69	34,369	28,517	18,411	8,528	13,465	15,885	42	371	119,587
1969-70	37,677	28,254	18,162	10,530	13,632	18,338	53	465	127,110
LOCAL VALUE(b)									
1965-66	32,342	28,870	13,590	9,693	11,965	13,837	75	384	110,756
1966-67	30,967	29,036	12,631	8,853	12,473	14,332	73	351	108,716
1967-68	34,162	27,448	12,948	8,100	13,274	13,420	42	365	109,759
1968-69	33,649	28,174	13,472	8,499	12,591	13,418	42	371	110,216
1969-70	36,832	27,939	13,081	10,511	12,795	15,572	53	465	117,238

(a) Gross production valued at principal markets. (b) Gross production valued at place of production.

## Timber and timber products

## Mill production of timber

Particulars of logs treated and the production of sawn, peeled and sliced timber by sawmills and other woodworking establishments are shown in the following table. The figures prior to 1967-68 have been compiled from annual factory collections, which cover virtually all sawmills. The only omissions are some small portable mills operated by itinerants, e.g. sleeper cutters. Figures for 1968-69 have been compiled from the Manufacturing Census of the Integrated Economic Censuses and are not strictly comparable with previous years because of changes in the census units and scope.



**OUTPUT OF AUSTRALIAN-GROWN TIMBER: ALL MILLS**  
**STATES 1968-69(a)**  
('000 super ft)

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total(b)
Sawn, peeled or sliced timber produced from logs—							
Broadleaved . . . . .	338,831	280,091	132,650	3,741	179,250	166,001	1,100,564
Coniferous . . . . .	60,918	35,275	65,965	104,367	8,802	1,337	276,664
Total, timber produced . .	399,749	315,366	198,615	108,108	188,052	167,338	1,377,228

(a) Statistics for 1969-70 are not yet available, see page 715. (b) Excludes Australian Capital Territory and Northern Territory.

**OUTPUT OF AUSTRALIAN-GROWN TIMBER, ALL MILLS: AUSTRALIA(a)**  
**1964-65 TO 1968-69(b)**  
('000 super ft)

	1964-65	1965-66	1966-67	1967-68	1968-69
Logs treated—					
Broadleaved . . . . .	2,767,843	(c)2,371,263	(c)2,313,256	(c)2,341,895	n.a.
Coniferous . . . . .	728,691	(c)569,521	(c)554,838	(c)532,965	
Total, logs treated . . . .	3,496,535	(c)2,940,784	(c)2,868,093	(c)2,874,860	
Sawn, peeled or sliced timber produced from logs above—					
Broadleaved . . . . .	1,203,705	1,185,831	1,151,369	1,173,931	1,100,564
Coniferous . . . . .	329,508	331,709	317,591	307,684	276,664
Total, timber produced . .	1,533,213	1,517,540	1,468,960	1,481,615	1,377,228

(a) Excludes Australian Capital Territory and Northern Territory. (b) Statistics for 1969-70 are not yet available, see page 715. (c) Gross hoppus basis: not necessarily comparable with details for years prior to 1965-66, which are generally on a true volume basis. Gross hoppus measure is approximately 78.5 per cent of the true volume.

In addition to the mill production of timber shown in the preceding tables, a large quantity of hewn and round timber, e.g. sleepers, piles, poles, fencing timber, timber used in mining and fuel, is obtained directly from forest and other areas. Complete information in respect of the volume of this output is not available.

**Veneers, plywood, etc.**

Cutting of timber for the manufacture of veneers, plywood, etc., has been carried out in most States for a number of years. In recent years this has been considerably extended, since plywood manufacture has allowed the use of some species unsuitable for sawing. Special attention has been paid to ensure that logs suitable for peeling are diverted to ply factories.

**PLYWOOD PRODUCED: STATES, 1964-65 TO 1968-69(a)**  
('000 square feet:  $\frac{3}{8}$ -in basis)

State	1964-65	1965-66	1966-67	1967-68	1968-69
New South Wales . . . . .	59,045	54,201	58,791	63,909	71,087
Queensland . . . . .	94,766	80,761	81,313	93,185	83,961
Other States . . . . .	63,249	52,296	60,348	71,929	73,532
Australia . . . . .	217,059	187,258	200,451	229,023	228,580

(a) Statistics for 1969-70 are not yet available, see page 715.

Of the total plywood produced in 1968-69, 123,823,000 square feet ( $\frac{3}{8}$ -in. basis) were classed as 'Commercial', 80,580,000 as 'Waterproof', 2,743,000 as 'Case', and 21,435,000 as 'Sliced fancy'.

During 1968-69, 709.6 million square feet ( $\frac{1}{8}$ -in. basis) of veneers were produced by the rotary process for the manufacture of plywood. In addition, 58.8 million square feet of sliced veneers were produced.

**Manufactured boards**

Particle board, resin or cement bonded of acoustic and other composition, amounted to 135,727,223 square feet surface measurement during 1968-69.



**Wood pulp and paper**

*Wood pulp.* During 1969-70 wood pulp production was 513,039 tons of chemical, mechanical and other pulp. During the previous year production was 410,933 tons.

Detailed information relating to the types and methods of production of wood pulp in the various States was published in Year Book No. 50, 1964, page 1110.

*Paper and paper board.* Paper and paper board are manufactured in all States but the greater part of the industry is in New South Wales, Victoria and Tasmania. During 1969-70 twenty-one paper mills were operating, nine in Victoria, three in New South Wales, four in Tasmania, two each in Queensland and South Australia, and one in Western Australia. A wide variety of paper and paper board is produced in Australian mills. The table below gives details of the production of some of the principal items.

**PRODUCTION OF PAPER PRODUCTS: AUSTRALIA, 1967-68 TO 1969-70**

Type of paper	Quantity (tons)			Value (\$'000)		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Newsprint . . . . .	92,648	123,935	170,576	12,688		
Blotting . . . . .	569	521	494	161		
Duplicating . . . . .	10,212	10,898	9,564	3,876		
Printing and writing . . . . .	112,780	121,013	124,271	35,952		
Wrapping—						
Kraft . . . . .						
Other . . . . .	183,591	230,444	252,303	43,344		
Paper felts . . . . .	1,164	1,356	1,533	243		
Paper boards . . . . .	334,660	342,405	388,396	57,093		

Not yet available  
See page 715

**Overseas trade in forest products, timber and timber products****Imports****IMPORTS OF FOREST PRODUCTS, TIMBER AND TIMBER PRODUCTS  
AUSTRALIA, 1967-68 TO 1969-70**

	Quantity			Value (\$'000 f.o.b.)		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Crude wood, timber and cork—						
Wood waste and charcoal						
Wood in the rough or roughly squared	'000 sup ft	53,166	49,033	54,871	10	16
Wood shaped or simply worked—					3,695	3,322
Timber, sawn lengthwise, sliced or peeled,						18
but not further prepared, of a thick-						3,671
ness exceeding 5 mm—						
Conifer—						
Douglas fir . . . . .	"	171,316	195,132	165,323	16,104	21,785
Hemlock and balsam . . . . .	"	11,200	12,562	19,733	865	1,175
Radiata pine . . . . .	"	25,016	29,474	28,384	1,868	2,108
Redwood . . . . .	"	28,905	30,065	2,225	3,851	4,435
Western red cedar . . . . .	"	18,564	17,693	15,570	2,443	2,600
Other . . . . .	"					487
Total conifer . . . . .	"	255,001	284,926	263,090	25,131	32,123
Non-conifer . . . . .	"				11,278	10,707
Timber (including blocks, strips, etc.),						
planed, tongued, grooved, rebated,						
etc., but not further manufactured—						
Conifer . . . . .	'000 sup ft	4,553	5,028	4,470	677	802
Non-conifer . . . . .	"	1,763	1,756	3,125	312	333
Cork, raw and waste . . . . .	"				404	282
Selected items of forest origin, other than						
crude wood, timber and cork—						
Tanning extracts of vegetable origin	cwt	74,005	96,015	63,524	504	565
Wood and cork manufactures (except						570
furniture)—						
Veneers, plywoods, 'improved' or						
reconstituted wood and other						
wood, worked, n.e.s. . . . .	"				7,777	8,580
Wood manufactures n.e.s. (house-						9,922
hold utensils, domestic utensils,						
building carpentry, etc.) . . . . .	"				3,722	4,417
Cork manufactures . . . . .	"				1,431	1,372

Imports of coniferous timbers, shaped or simply worked, came mainly from Canada, New Zealand and the United States of America in 1969-70. Malaysia was the source of by far the greater proportion of non-coniferous timber imports. Malaysia, Federal Republic of Germany and the United Kingdom supplied most of Australia's imports of veneers, while plywood imports came mainly from Papua and New Guinea and the Republic of China (Taiwan).

### Exports

#### EXPORTS OF AUSTRALIAN FOREST PRODUCTS, TIMBER AND TIMBER PRODUCTS(a) AUSTRALIA, 1967-68 TO 1969-70

	Quantity			Value (\$'000 f.o.b.)			
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70	
Crude wood, timber and cork—							
Wood waste and charcoal (including shell and nut charcoal)	..	..	..	2	86	23	
Wood in the rough or roughly squared	..	..	..	636	286	476	
Wood, shaped or simply worked—							
Railway or tramway sleepers	'000 sup ft	5,621	3,312	8,214	863	522	1,279
Timber, sawn lengthwise, sliced or peeled, but not further prepared, of a thickness exceeding 5 mm—							
Conifer	..	574	143	169	99	37	46
Non-conifer—Jarrah	..	3,886	6,723	5,672	643	1,169	940
Other	..	5,978	6,281	12,218	991	1,123	2,187
Timber (including blocks, strips, and friezes for parquet or wood block flooring, not assembled), planed, tongued, etc.—							
Conifer	..	808	540	562	224	146	130
Non-conifer	..	588	624	453	146	114	121
Cork, raw and waste	cwt	..	101	40	..	5	1
Selected items of forest origin other than crude wood, timber and cork—							
Natural gums, resins, gum-resins, balsam and lacs	cwt	8,160	7,569	7,839	66	60	61
Eucalyptus oil	'000 lb	355	205	304	269	149	180
Wood and cork manufactures (except furniture)—							
Veneers plywood boards, etc.—							
Wood sawn lengthwise, sliced or peeled, not further prepared, veneer sheets and sheets for plywood, of a thickness not exceeding 5 mm	'000 sq ft	3,584	3,604	9,228	151	162	383
Plywood, blockboard, laminated wood products, inlaid wood and marquetry, cellular wood panels—							
Plywood	..	1,715	1,710	2,090	316	319	400
Other	..	..	1,928	633	100	162	57
Reconstituted wood, in panels, sheets or strips	..	1,106	1,262	1,844	147	191	311
Wooden beadings and mouldings	..	..	..	..	61	176	143
Improved wood, and wood simply shaped or worked, n.e.s.	..	..	..	..	11	25	12
Wood manufactures n.e.s., and plants and parts of plants used in dying and tanning	..	..	..	..	720	1,245	622
Cork manufactures n.e.s.	..	..	..	..	83	78	118

(a) Excludes re-exports.

## CHAPTER 26

### FISHERIES

Further information on subjects dealt with in this chapter is contained in the annual printed bulletin *Non-Rural Primary Industries* and in the annual mimeographed statistical bulletin *Fisheries*, particularly as regards types of fish, etc. caught.

#### Fisheries resources and their commercial exploitation

##### Fish

Approximately 2,000 species of marine and freshwater fish occur in and around Australia, about forty of which support substantial commercial fisheries. Most fishing is confined to waters over the continental shelf on the populous eastern and south-eastern seaboard, including Tasmania and South Australia, and off the south-western corner of the continent. As in other countries, fisheries in Australia may be divided into estuarine fisheries, located in the tidal waters of rivers and coastal lakes, beaches and bays; pelagic fisheries, which exploit species inhabiting the surface layers of the open ocean; and demersal fisheries, which fish the bottom layers of the sea. Estuarine fisheries produce considerable quantities of mullet (mainly *Mugil cephalus*), bream (*Acanthopagrus spp.*) and, in northern Australia, the valuable giant perch (*Lates calcarifer*). Important freshwater fisheries in New South Wales, Victoria and South Australia include those for Murray cod (*Maccullochella macquariensis*), golden perch (*Plectroplites ambiguus*) and eels (*Anguilla australis occidentalis*). Rainbow trout are farmed in Tasmania. Important pelagic fisheries include those for Australian 'salmon' (*Arripis trutta*), southern bluefin tuna (*Thunnus thynnus maccoyii*), snoek (*Leionura atun*), mackerel (*Cybium spp.*) and clupeoids (*Sardinops neopilchardus* and *Engraulis australis*). Demersal fisheries include those for snapper (*Chrysophrys auratus*), whiting (*Sillaginidae*) and the so called 'cods' (*Epinephelus*, etc.) from tropical waters. Trawl fisheries off New South Wales and Victoria yield species such as flathead (*Neoplatycephalus* and *Trudis spp.*), morwong (*Nemadactylus spp.*) and John Dory (*Zeus faber*). There is also an important fishery for edible shark (*Galeorhinus australis* and *Mustelus antarcticus*) in south-eastern Australia. A fishery for clupeoids in the Bass Strait which supplies the raw material for a fish meal plant at Lakes Entrance, Victoria, is the only 'industrial fishery' in Australia.

##### Crustaceans

The western and southern rock lobsters (*Jasus lalandei* and *Panulirus cygnus*) which are taken on rocky reefs around the southern half of Australia, provide the most valuable fishery in Australia. Prawns (*Penaeus* and *Metapenaeus spp.*) are taken in estuarine, coastal and offshore waters of all States except Tasmania. This fishery has grown rapidly in recent years, especially in northern Australia. Bay lobsters (*Thenus spp.*) are taken incidentally to prawn trawling operations. Crabs (*Scylla* and *Portunus spp.*) are taken mainly in Queensland, New South Wales and Western Australia.

##### Molluscs

Naturally occurring oysters are harvested in all States, and in New South Wales edible oysters (*Crassostrea commercialis*) are cultured commercially. There is limited culture of other species in Queensland, Tasmania and, recently, South Australia. Following a serious decline in catches in the scallop (*Pecten alba*) fishery based on stocks in Port Phillip Bay, Victoria, new offshore beds have been located in southern New South Wales, eastern Victoria and south-western Western Australia. Present catches are good. A fishery based on the scallop (*Amusium balloti*) is developing in another area of Western Australia, and there are also smaller fisheries in Queensland and Tasmania. An important abalone fishery has been developed since 1964 in south-east Australia with South Australia, Tasmania and Victoria providing the bulk of the catches. Mussels (*Mytilus planulatus*) are harvested in Victoria, and small quantities of cephalopods, mainly squid, are produced in many localities.

##### Pearl-shell and trochus-shell

The shell of the Australian species of pearl oyster (*Pinctada maxima*) is taken in the tropical waters of Australia from Exmouth Gulf in Western Australia to Cairns in Queensland for the manufacture of buttons, knife handles, etc. Live pearl-shell is used for pearl culture, *Pinctada maxima*

being capable of producing pearls which are the largest in the world and which command top market prices. Trochus-shell is found mainly on coral reefs off the Queensland coast, although small quantities occur in Western Australia.

### Whales

The Australian whaling industry formerly exploited the baleen (humpback) whales during their winter migrations along the east and west coasts of Australia. However, owing to the total prohibition placed on their capture by the International Whaling Commission in 1963, Australian whaling is now confined to the sperm whale (*Physeter catodon*) which has been taken in the southern waters of Western Australia since 1955.

### Marine flora

The only substantial commercial collection of seaweed in Australia is undertaken at Triabunna, Tasmania, where a factory is processing seaweed (*Macrocystis pyrifera*) for its alginate content.

### General

A map showing Australia's principal ports and localities of the fishery resources under exploitation appears on plate 46, page 882. Detailed information on the history of the development of fisheries industries in Australia is given in Year Book No. 55, pages 976-7.

## Fisheries administration and research

The Constitution of the Commonwealth (Section 51 (x)) assigns to the Commonwealth power to legislate for fisheries in Australian waters beyond territorial limits, the residual power in respect of waters within territorial limits (including inland waters) resting with the States. The Commonwealth has made similar arrangements for each of its Territories. Each State and Territory has legislation regulating fisheries in waters within its jurisdiction. Persons taking fish for sale, and their boats, are required to be licensed, and provision is made for management of the fisheries.

The Commonwealth laws regulating the fisheries are the *Fisheries Act* 1952-1970, the *Continental Shelf (Living Natural Resources) Act* 1968 and the *Whaling Act* 1960-1966. Each of these applies in accordance with the Commonwealth's fishery power under the Constitution.

### Fisheries Act

This Act requires persons engaging in fishing and boats used for fishing to be licensed and their equipment for taking fish to be registered if the purpose of the fishing is commercial. It also provides for management and conservation of the fisheries. The Act applies to Australian residents and their boats in waters proclaimed under the Act and, since 1968, to foreign boats and their crews in the zone of waters extending 12 miles from the baselines of the territorial sea but excluding waters within territorial limits, where State law applies.

### Continental Shelf (Living Natural Resources) Act

This Act implements in Australian law the sovereign rights, conferred on Australia in respect of the organisms belonging to sedentary species (that is, organisms which, at the harvestable stage, either are immobile on or under the seabed, or are unable to move except in constant physical contact with the seabed or the subsoil) on the continental shelf. The continental shelf comprises the seabed and subsoil of the submarine areas adjacent to the coast but outside the territorial sea to a depth of 200 metres, or beyond that depth where the depth of the superjacent waters admits of the exploitation of the natural resources of the area, by the Convention on the Continental Shelf, Geneva, 1958. The Act requires the licensing of persons searching for and taking sedentary organisms, of boats used to search for and take sedentary organisms, and of persons employing divers, trial divers and divers' tenders in taking sedentary organisms, if such activities are carried out in controlled areas of the continental shelf of Australia or the Territories for a commercial purpose. Provision is made for proclamation of sedentary organisms to which the Act applies, for the establishment of controlled areas of continental shelf in respect of specified sedentary organisms, and for the management and conservation of sedentary organisms in controlled areas (the last of these applying to all persons whether the purpose of the taking of the sedentary organism was commercial or not.) The Act applies to all persons including foreigners, and to all boats including foreign boats.



### Whaling Act

This Act implements in Australian law the obligations imposed on Australia by virtue of our adherence to the International Convention for the Regulation of Whaling, Washington, 1946. The Act requires the licensing of factories engaged in treating whales and of ships (and aircraft) used for taking whales. It also provides for the management and conservation of whale stocks.

### Administration

Australian fisheries are administered by the authority having jurisdiction over the waters concerned. In inland waters and in waters within territorial limits, administration is the responsibility of the State or Territory fisheries authority. In proclaimed waters, and on the continental shelf beyond territorial limits, administration is the responsibility of the Commonwealth which, by agreement, has delegated to State fisheries authorities the necessary authorities for day-to-day administration of the Acts.

The administration of the fisheries is directed to a number of objectives, of which the two most important are conservation of the living resources in order to ensure their ability to sustain a maximum yield consistent with economy in their exploitation and the orderly conduct of the fishing industry. Fishery resources are common property and apart from fisheries such as those for rock lobster and abalone, where the numbers of boats and the quantities of fishing gear are controlled, the only other restrictions on the entry of boats into the Australian fishing industry are those relating to foreigners, and to processing and carrying boats in the northern prawn fishery. Management measures have been introduced in several fisheries to provide controls such as minimum sizes, closed areas, closed seasons and regulation of the types of fishing gear that may be used.

The Fisheries Development Trust Account (established under the *Fishing Industry Act* 1956) and the Fishing Industry Research Trust Account (established under the *Fishing Industry Research Act* 1969) are available to support financially projects of kinds consistent with the purposes of those Acts for the development and management of the fisheries and fishing industry. The former is supported by the proceeds of the sale of the assets of the Australian Whaling Commission. The latter is a matching fund into which is paid each year an appropriation from Commonwealth Revenue equal to amounts collected from the fishing industry by the State Fisheries Authorities and expended by the States for the same purposes.

### Research

The main aim of fisheries research in Australia is to achieve the greatest sustainable yield of fish and to assist in the development of an efficient industry. To this end much of the biological research already undertaken has been directed at formulating recommendations for management of various fisheries. Research work is also carried out which is expected to lead to the development of new fisheries, the expansion of under-exploited fisheries, greater economy in operations and the use of more efficient equipment and methods.

Organisations in Australia at present engaged in research into fisheries matters are:

- (i) C.S.I.R.O. Division of Fisheries and Oceanography, with its headquarters and main laboratory at Cronulla, N.S.W. (fisheries science and oceanography);
- (ii) C.S.I.R.O. Division of Food Research; main laboratories located at Ryde, N.S.W. (handling, storage, processing and transportation of fish);
- (iii) State fisheries departments (new fisheries laboratories have been established in Perth, Hobart, Melbourne and Sydney; new research vessels have been launched by Victoria, New South Wales and Western Australia; the Northern Territory Administration has recently established a Prawn Research Unit in Darwin);
- (iv) Fisheries Division, Department of Primary Industry, Canberra (economic and management research, gear technology, extension and education service); and
- (v) private fishing companies (surveys of fisheries resources, research into handling and processing).

## Collection and presentation of fisheries statistics

### Source and basis of statistics

Statistics presented in this chapter have been collected by a number of authorities. The various State fisheries authorities have supplied, through the Deputy Commonwealth Statisticians in the States, the details of employment, boats, equipment, and production of the general fisheries. The Fisheries division of the Department of Primary Industry has supplied particulars of the whaling



industry and pearl-shell fishery. Statistics of the processing of general fisheries products and of overseas trade in the products of fishing and whaling have been compiled in the Commonwealth Bureau of Census and Statistics.

The statistics refer, in general, to financial years. However, pearl and shell fishing data refer to the season ended in the financial year shown. Whaling statistics are shown by calendar years, and refer to the season in the calendar year. All overseas trade information refers to financial years.

In the preparation of Australian fisheries production statistics the quantities of individual products are generally in terms of the form in which they are taken from the water. For example, the statistics of fish production published in this chapter are in terms of 'estimated live weights' which are calculated from landed weights by using conversion factors for each species in each State. These conversion factors allow for the fact that the quantities of fish reported are frequently in a gutted, headed and gutted, or otherwise reduced condition. Crustaceans are reported on an 'estimated live weight' basis and molluscs (edible) on a 'gross (in-shell) weight' basis. The figures of pearl-shell and trochus-shell refer to the actual quantities of dry shell for sale and exclude the weight of the fish.

Two weaknesses of fisheries statistical collections in Australia to date have been the lack of uniformity, which makes it difficult to compile statistics on an Australia-wide basis, and the lack of data on the effort involved in taking fish (time spent fishing, gear used, etc.). Recognising these weaknesses, the Commonwealth-States Fisheries Conference in 1960 appointed a Statistics Committee 'to examine all aspects of fisheries statistics and fully document a proposed system for submission to the States and Commonwealth for approval'.

#### Model system of catch and effort statistics, 1962

The model system of catch and effort statistics designed by the Committee was adopted by the Commonwealth-States Fisheries Conference in 1962. The new system was introduced in Tasmania in 1963, in Victoria and Western Australia in 1964 and in South Australia in 1969. The system was introduced in Queensland for the otter trawl fishery early in 1965, but there are no definite plans at present to extend it to other fisheries.

Under the new system fishermen are asked to report monthly the various fishing methods used, catch of each species taken and the locality where the greatest proportion of the catch is taken. Fishermen record catch in terms of landed weight, and appropriate conversion factors are used to obtain live weight where this is required. A grid system of 1° rectangles (relating to latitude and longitude) is used for recording location of catches at sea, and estuaries and inland waters are recorded where appropriate. Other data obtained include details of fishing effort, ports at which catch is landed, and employment details.

### Boats and equipment used in fisheries

#### Fish, crustaceans and molluscs (edible)

The boats used for the estuarine fisheries are mostly small vessels, propelled by diesel or petrol engines of low power. The offshore vessels range up to 120 feet in length and are almost invariably powered by diesel engines. Most of them have either insulated holds and carry ice, or are equipped with dry or brine refrigeration. Some rock lobster vessels are fitted with wells in which the catch is kept alive. About 25 per cent of the vessels registered in Australia for commercial fishing are over 30 feet in length. Recently, a number of well equipped, double rigged, prawn trawlers of 60 feet to 75 feet in length have been built for the rapidly developing northern prawn fisheries.

The following are the types of equipment most commonly used in the main fisheries: *mullet*, beach seine, gill net; *shark (edible)*, long-lines, gill net; *Australian Salmon*, beach seine; *snoek*, trolling lines; *flathead*, Danish seine, otter trawl; *snapper*, long-lines, traps, gill net, hand-line; *morwong*, Danish seine, otter trawl, traps; *whiting*, handlines, Danish seine, beach seine, gill net; *garfish*, beach seine; *mackerel*, trolling lines; *tuna*, pole and live-bait, trolling lines (lampara nets and purse seines are used for taking live bait for tuna); *prawns*, otter trawl, beam trawl, beach seine net; *rock lobster*, pots, traps; *scallops*, dredge, otter trawl.

#### Pearls, pearl-shell and trochus-shell

Ketch-rigged luggers about fifty-five feet long which carry crews of eight to fourteen members are used for pearl-shell fishing in northern Australia.

#### Whaling

The whaling industry is highly mechanised. Standard equipment includes aircraft to locate whales diesel-powered catchers of about 100 to 125 feet in length, and tow boats.



**Boats and equipment employed by industry**

The following two tables show details of boats and equipment employed in the taking of fish, crustaceans and edible molluscs, pearl-shell and trochus-shell, and the number of chasers and stations engaged in whaling operations. The reservations mentioned below regarding the use of employment information are also applicable to these tables. Boats employed in more than one industry are classified to their main activity.

**FISHERIES: BOATS AND EQUIPMENT EMPLOYED AND WHALING STATIONS  
OPERATING, STATES AND NORTHERN TERRITORY, 1969-70**

		<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
General fisheries—									
Boats employed . . . . .	No.	2,659	795	1,534	(a)1,784	1,450	553	82	8,857
Value of boats and equipment	\$'000	9,862	5,910	15,644	9,707	18,243	6,624	5,386	71,376
Edible oyster fisheries—									
Boats employed . . . . .	No.	1,699	..	106	..	..	n.a.	..	1,805
Value of boats and equipment	\$'000	1,663	..	78	..	..	n.a.	..	1,741
Pearl-shell and trochus-shell, boats employed(b)	No.	..	..	15	..	12	..	2	29
Whaling(b)—									
Chasers . . . . .	No.	..	..	..	..	3	..	..	3
Stations operating . . . . .	"	..	..	..	..	1	..	..	1

(a) Not comparable with previous years because of changes in basis of counting. (b) Source: Department of Primary Industry.

**FISHERIES: BOATS AND EQUIPMENT EMPLOYED AND WHALING STATIONS  
OPERATING, AUSTRALIA, 1965-66 TO 1969-70**

		1965-66	1966-67	1967-68	1968-69	1969-70
General fisheries—						
Boats employed . . . . .	No.	8,983	8,991	9,354	9,244	(a)8,857
Value of boats and equipment	\$'000	40,602	46,102	51,456	(b)64,072	71,376
Edible oyster fisheries—						
Boats employed . . . . .	No.	1,415	1,549	1,599	1,788	1,805
Value of boats and equipment	\$'000	1,161	1,127	1,444	1,744	1,741
Pearl-shell and trochus-shell, boats em- ployed(c)	No.	42	42	49	33	29
Whaling(c)—						
Chasers . . . . .	No.	3	3	3	3	3
Stations operating . . . . .	"	1	1	1	1	1

(a) Not comparable with previous years because of changes in basis of counting in South Australia. (b) Not comparable with previous years because of changes in methods of valuation in Western Australia. (c) Source: Department of Primary Industry.

## Employment in fisheries

### Persons engaged in fishing activities, 1966 census

The number of persons whose industry statements were classified to 'fishing' at the 1966 census was 8,021 out of a total of 512,994 in all primary industries and 4,856,455 in the total work force. The census classification 'fishing' includes such activities as fishing, whaling, pearl-shell fishing, oyster-farming, etc. For further information see the chapter Employment and Unemployment, also 1966 Census Bulletin No. 9.6, *Population: By Industry and Occupational Status, Australia*.

### Classification of registered commercial fishermen by industry

The following two tables are derived mainly from the licensing records of the various State fisheries authorities. Because the definitions and licensing procedures used by these authorities are not uniform the statistics should not be used to compare the relative productivities of fishing industries in the several States. Persons engaged in more than one industry are classified according to their main activity, and so may be classified differently from one year to the next.



REGISTERED COMMERCIAL FISHERMEN: STATES AND NORTHERN TERRITORY  
1969-70

Industry	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
General fisheries . . .	3,930	1,429	3,035	(a)2,675	3,000	1,123	437	15,629
Edible oyster fisheries . .	1,371	..	341	..	5	n.a.	..	1,717
Pearl-shell and trochus-shell(b) . . .	..	..	274	..	115	..	33	422
Whaling(b)—								
At sea . . . . .	..	..	..	..	51	..	..	51
Ashore . . . . .	..	..	..	..	48	..	..	48

(a) Not comparable with previous years because of changes in basis of counting. (b) Source: Department of Primary Industry.

## REGISTERED COMMERCIAL FISHERMEN: AUSTRALIA, 1965-66 TO 1969-70

Industry	1965-66	1966-67	1967-68	1968-69	1969-70
General fisheries . . . . .	12,256	12,657	14,965	16,460	(a)15,629
Edible oyster fisheries . . . . .	1,072	1,249	1,319	1,425	1,717
Pearl-shell and trochus-shell(b) . . . . .	544	571	538	473	422
Whaling(b)—					
At sea . . . . .	44	45	45	48	51
Ashore . . . . .	42	43	40	32	48

(a) Not comparable with previous years because of changes in basis of counting in South Australia. (b) Source: Department of Primary Industry.

## Production, processing and domestic marketing of fisheries products

The tables on pages 886-8 show details of the production of the main types of fish, crustaceans, and molluscs caught in each State and the Northern Territory in 1969-70 and throughout Australia for the years 1965-66 to 1969-70.

## Production of selected fisheries

SELECTED FISHERIES PRODUCTS: PRODUCTION, STATES AND NORTHERN TERRITORY  
1969-70

Product	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Fish(a) . . . . . '000 lb	39,911	35,235	9,289	18,813	12,592	5,878	275	121,993
Crustaceans(b) . . . . . "	4,785	1,791	9,085	7,452	20,896	3,065	8,688	55,761
Molluscs (edible) (c) . . . . . "	20,969	10,139	5,651	2,469	2,938	5,930	1	48,098
Pearl-shell(d) . . . . . ton	..	..	119.5	..	137.7	..	7.0	(e)525.9

(a) Estimated live weight. (b) Gross weight. (c) Gross (in shell) weight. (d) Source: Department of Primary Industry. (e) Includes manufacturing shell produced from pearl culture operations for which State details are not available for publication.

## SELECTED FISHERIES PRODUCTS: PRODUCTION, AUSTRALIA, 1965-66 TO 1969-70

Product	1965-66	1966-67	1967-68	1968-69	1969-70
Fish(a) . . . . . '000 lb	103,976	98,533	102,603	108,134	121,993
Crustaceans(b) . . . . . "	43,270	46,215	54,017	51,158	55,761
Molluscs (edible)(c) . . . . . "	48,262	57,502	64,908	42,999	48,098
Pearl-shell(d)(e) . . . . . ton	455.0	459.5	494.9	468.3	525.9
Trochus-shell(d) . . . . . "	10.8	2.6	1.0	5.8	0.2

(a) Estimated live weight. (b) Gross weight. (c) Gross (in shell) weight. (d) Source: Department of Primary Industry. (e) Includes manufacturing shell produced from pearl culture.

## Fish

**FISH: PRODUCTION, BY TYPE, STATES AND NORTHERN TERRITORY, 1969-70**  
(<sup>0</sup>000 lb estimated live weight)

Type	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Freshwater types—	266	340	n.a.	863	..	23	..	(a)1,494
Marine types—								
Tuna . . . . .	(b)12,974	555	60	3,909	1,122	11	..	18,630
Mackerel . . . . .	73	..	1,460	..	133	11	4	1,682
Snoek . . . . .	54	5,558	..	..	..	3,480	..	9,092
Mullet . . . . .	6,109	630	2,924	364	1,546	31	18	11,622
Tailor . . . . .	257	55	718	..	112	..	..	1,142
Bream (including Tarwhine)	559	1,060	369	38	37	..	..	2,063
Australian salmon . . . . .	1,405	1,142	..	3,096	4,713	148	..	10,503
Ruff . . . . .	..	59	..	494	1,353	..	..	1,907
Snapper . . . . .	1,370	487	152	1,065	455	..	..	3,528
Morwong . . . . .	1,715	152	..	..	9	3	..	1,879
Whiting . . . . .	358	733	623	2,294	556	..	..	4,564
Luderick . . . . .	1,349	152	149	..	..	..	..	1,650
Flathead . . . . .	3,536	2,447	136	..	15	24	..	6,158
Shark . . . . .	2,309	7,444	22	4,700	826	1,767	1	17,070
Leatherjacket . . . . .	1,616	41	..	..	23	..	..	1,679
Garfish . . . . .	296	490	127	958	44	51	..	1,966
Other . . . . .	5,664	13,890	2,549	1,032	1,648	329	252	25,365
<i>Total marine</i> . . . . .	39,644	34,895	9,289	17,950	12,592	5,855	275	120,500
<b>Grand total</b> . . . . .	39,911	35,235	9,289	18,813	12,592	5,878	275	121,993

(a) Incomplete, excludes Queensland.

(b) Source: C.S.I.R.O.

**FISH: PRODUCTION, BY TYPE, AUSTRALIA, 1965-66 TO 1969-70**  
(<sup>0</sup>000 lb estimated live weight)

Type	1965-66	1966-67	1967-68	1968-69	1969-70
Freshwater types(a)	1,060	1,184	1,082	1,694	1,494
Marine types—					
Tuna(b)	18,595	12,455	14,998	19,657	18,630
Mackerel . . . . .	2,298	2,153	2,221	1,755	1,682
Snoek . . . . .	8,539	5,146	7,307	8,587	9,092
Mullet . . . . .	14,152	12,460	11,719	11,184	11,622
Tailor . . . . .	1,357	799	1,362	973	1,142
Bream (including Tarwhine)	1,508	1,692	2,065	1,986	2,063
Australian salmon . . . . .	11,184	14,898	15,658	9,464	10,503
Ruff . . . . .	1,442	1,636	1,313	1,812	1,907
Snapper . . . . .	3,344	3,668	3,548	2,908	3,528
Morwong . . . . .	3,021	3,772	2,980	2,629	1,879
Whiting . . . . .	3,600	3,619	3,679	3,838	4,564
Luderick . . . . .	1,698	1,455	1,486	1,410	1,650
Flathead . . . . .	5,824	5,848	5,370	6,076	6,158
Shark . . . . .	11,597	13,322	13,281	15,818	17,070
Leatherjacket . . . . .	1,494	986	854	814	1,679
Garfish . . . . .	1,471	1,780	1,659	1,904	1,966
Other . . . . .	11,792	11,660	12,023	15,625	25,365
<i>Total marine</i> . . . . .	102,916	97,349	101,522	106,440	120,500
<b>Grand total</b> . . . . .	103,976	98,533	102,603	108,134	121,993

(a) Excludes freshwater fish caught in Queensland, particulars of which are not available. (b) Includes estimate by C.S.I.R.O. for New South Wales.

## Crustaceans

CRUSTACEANS: PRODUCTION, BY TYPE, STATES AND NORTHERN TERRITORY, 1969-70  
(\*000 lb gross weight)

Type	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Rock lobster(a)	339	1,788	158	4,578	15,335	3,065	...	25,264
Prawns	4,202	2	8,217	2,872	5,492	..	8,682	29,467
Crabs	244	..	710	3	68	..	6	1,031
Total	4,785	1,791	9,085	7,452	20,896	3,065	8,688	55,761

(a) Includes freshwater crayfish caught in New South Wales and Victoria, and bay lobster taken in New South Wales, Queensland and Western Australia.

CRUSTACEANS: PRODUCTION, BY TYPE, AUSTRALIA, 1965-66 TO 1969-70  
(\*000 lb gross weight)

Type	1965-66	1966-67	1967-68	1968-69	1969-70
Rock lobster(a)	29,908	(b)31,625	(b)33,107	(b)28,883	(c)25,264
Prawns	12,547	13,624	20,100	21,414	29,467
Crabs	815	966	809	860	1,031
Total	43,270	46,215	54,017	51,158	55,761

(a) Includes freshwater crayfish caught in New South Wales and bay lobster taken in Queensland. (b) Includes also freshwater crayfish caught in Victoria. (c) Includes also freshwater crayfish caught in Victoria and bay lobster taken in New South Wales and Western Australia.

## Molluscs (edible)

MOLLUSCS: PRODUCTION, BY TYPE, STATES, 1969-70  
(\*000 lb gross [in-shell] weight)

Type	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Octopus	..	62	..	(a)	..	..	..	62
Squid	..	260	195	(b)74	31	1	..	561
Cuttlefish	..	5	..	(a)	5	..	..	10
Oysters	20,197	..	358	12	3	69	..	20,639
Scallops	..	3,979	5,098	..	2,862	111	1	12,051
Mussels	154	516	..	..	(c)	..	..	670
Abalone	618	5,317	..	2,383	38	5,749	..	14,105
Total	20,969	10,139	5,651	2,469	2,938	5,930	1	48,098

(a) Included with squid. (b) Includes cuttlefish and octopus. (c) Not available for publication; excluded from Australian total.

## MOLLUSCS: PRODUCTION, BY TYPE, AUSTRALIA, 1965-66 TO 1969-70

('000 lb gross [in-shell] weight)

Type	1965-66	1966-67	1967-68	1968-69	1969-70
Octopus . . . . .	34	(a)34	(b)18	(b)26	(b)62
Squid . . . . .	233	(c)369	(d)377	(d)374	(d)561
Cuttlefish . . . . .	3	(b)	(b)1	(b)7	(b)10
Oysters . . . . .	15,067	16,115	(e)16,636	(f)16,574	20,639
Scallops . . . . .	(f)29,524	(f)29,923	28,757	11,285	12,051
Mussels . . . . .	425	(f)260	(f)246	119	(f)670
Abalone . . . . .	2,975	10,825	18,872	(f)14,614	14,105
Total(g) . . . . .	48,262	57,527	64,908	42,999	48,098

(a) Excludes production for Queensland and South Australia, which is included with squid. (b) Production for South Australia is included with squid. (c) Includes octopus for Queensland and cuttlefish and octopus for South Australia. (d) Includes cuttlefish and octopus for South Australia. (e) Excludes particulars for Western Australia and Tasmania which are not available for publication. (f) Excludes particulars for Western Australia which are not available for publication. (g) Incomplete, see relevant footnotes.

## Pearls, pearl-shell and trochus-shell

## PEARL CULTURE OPERATIONS: AUSTRALIA, 1965 TO 1969

(Source: Department of Primary Industry)

		1965	1966	1967	1968	1969
Live shell introduced . . . . .	No. of shells tons	635,003 311.6	697,443 345.5	783,733 427.6	838,622 440.1	796,831 404.3
Production of—						
Cultured pearls—						
Round and baroque pearls	No. momme(a)	65,735 40,098	105,121 63,073	56,653 30,061	76,337 42,854	77,858 44,334
	\$'000	1,760	2,975	1,539	2,499	3,020
Half pearls . . . . .	No. \$'000	278,637 883	264,012 621	266,466 680	522,247 1,165	631,476 1,409
Manufacturing shell . . . . .	tons \$'000	155.4 67	160.1 70	168.2 80	213.4 86	261.7 120

(a) A momme is a pearl weight measurement equivalent to 0.13 oz (avoirdupois).

PEARL-SHELL AND TROCHUS-SHELL: PRODUCTION  
STATES AND NORTHERN TERRITORY, 1965 TO 1969

(Source: Department of Primary Industry)

(Tons)

	1965	1966	1967	1968	1969
Pearl-shell(a)—					
Queensland . . . . .	193.3	179.6	189.2	137.9	119.5
Western Australia . . . . .	97.4	103.2	132.7	117.0	137.7
Northern Territory . . . . .	8.9	16.6	4.8	..	7.0
Australia . . . . .	299.6	299.4	326.7	254.9	264.2
Trochus-shell—					
Queensland . . . . .	10.8	2.6	1.0	5.8	0.2

(a) Excludes manufacturing shell produced from pearl culture operations.



# **WHALES TAKEN(a): AUSTRALIA, 1966 TO 1970**

(Source: Department of Primary Industry)

(Number)

	1966	1967	1968	1969	1970
Male . . . . .	595	560	585	637	775
Female . . . . .	11	27	73	42	24
<b>Total . . . . .</b>	<b>606</b>	<b>587</b>	<b>658</b>	<b>679</b>	<b>799</b>

(a) Sperm whales only were taken.

## **Processing of fish, crustaceans and molluscs**

Ice is extensively used for the chilling of fish taken in estuarine and inshore fisheries. Refrigeration is used particularly on vessels operating in the tuna fishery and prawn fisheries to chill or freeze the catch. Refrigerated brine tanks are most commonly used.

Processing plants are located strategically throughout Australia close to fishing grounds. In recent years a number of shore-based plants have been established in remote areas of northern Australia to service the expansion of the prawn fishery. Processing vessels receiving prawns from a fleet of trawlers are also operating in this fishery.

Rock lobsters, prawns and scallops are frozen for export; tuna, snoek, Australian salmon and abalone are canned; small amounts of fish are smoked; some molluscs are bottled. Hand labour is still used extensively in processing operations, but mechanisation is being progressively introduced.

Edible fish for local consumption is mainly dispatched fresh iced to markets.

## **FISH PROCESSING (EXCEPT FREEZING): AUSTRALIA 1965-66 TO 1969-70**

('000 lb)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>Fish used(a)—</b>					
Whole . . . . .	17,030	18,782	24,146	25,323	24,651
Headed and or gutted . . . . .	5,866	6,872	7,824	5,181	4,909
<i>Estimated live weight equivalent,</i>					
<i>fish used . . . . .</i>	<i>23,900</i>	<i>26,700</i>	<i>33,200</i>	<i>31,300</i>	<i>30,100</i>
<b>Production(b)—</b>					
<b>Canned fish(c)—</b>					
Australian salmon . . . . .	4,664	6,344	6,736	4,368	5,555
Tuna . . . . .	4,839	5,639	8,193	8,618	8,111
Other . . . . .	2,350	1,818	2,469	1,894	1,952
<i>Total, canned fish . . . . .</i>	<i>11,853</i>	<i>13,801</i>	<i>17,398</i>	<i>14,880</i>	<i>15,619</i>
Smoked fish . . . . .	258	241	259	175	221
Fish paste . . . . .	1,018	1,146	1,310	1,194	1,135
Fish meal(d) . . . . .	1,778	1,805	1,714	2,179	3,989

(a) Fish used for canning (including fish loaf), smoking and the manufacture of fish paste, but excluding the weight of oysters, other shellfish and crustaceans used for canning. (b) Excludes canned rock lobsters, prawns, oysters, and clams, details of which are not available for publication. (c) Includes fish loaf, fish cakes, etc. (d) Excludes whale meat.

## **Whale processing**

Oil from sperm whales is used in the manufacture of soap, plastics and watch lubricants, and in automatic transmission systems in motor cars.

# **WHALE PROCESSING: AUSTRALIA, 1966 TO 1970**

(Source: Department of Primary Industry)

		1966	1967	1968	1969	1970
Quantity of sperm whale oil produced	barrels(a)	24,252	22,428	23,474	26,142	31,686
Value of whale oil produced	\$'000	540	423	435	607	1,082
Value of by-products (meal, meat, solubles, etc.)	„	398	282	313	349	481
<i>Total value of products</i>	„	938	705	748	956	1,563

(a) 6 barrels = 1 ton.

## **Domestic marketing of fisheries products**

Although virtually the whole of the tuna and Australian salmon catches and a large proportion of the snoek catch are canned, the greater part of Australian fish production is marketed fresh or frozen.

Marketing arrangements for fresh fish vary. In New South Wales fish marketing is the responsibility of the New South Wales Fish Authority, which operates the Metropolitan and Wollongong Fish Markets. In other coastal centres of New South Wales fishermen's co-operatives may become registered as local fish markets. In Queensland the Fish Board and North Queensland Fish Board sells all production on behalf of fishermen in that State, except for fish intended for export and interstate trade. In Victoria, Western Australia, South Australia and Tasmania there is no restriction on market outlets. In South Australia the great majority of fishermen are members of the South Australian Fishermen's Co-operative Ltd, which handles the whole of their production. Other outlets for fish products include retail and catering establishments.

## **Value of fisheries production**

The following tables show details of the values of production of edible fisheries products, pearl-shell and trochus-shell for the years 1965-66 to 1969-70. *See also* the chapter Miscellaneous for an explanation of the value terms used.

## **SELECTED FISHERIES PRODUCTS: GROSS VALUE, STATES AND NORTHERN TERRITORY 1969-70 (\$'000)**

Product	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Fish	5,488	3,137	(a)2,074	2,874	1,019	592	51	15,235
Crustaceans	3,062	1,502	3,759	4,841	14,829	2,437	3,648	34,077
Molluscs (edible)	4,906	992	506	424	(b)214	958	..	8,001
Pearl-shell(c)	..	..	(d)78	..	(d)109	..	(d)4	(e)310

(a) Excludes freshwater fish, particulars of which are not available. (b) Excludes mussels and green turtle, particulars of which are not available for publication. (c) Source: Department of Primary Industry. (d) Estimated. (e) Includes manufacturing shell produced from pearl culture operations for which details classified by States are not available for publication.

## **SELECTED FISHERIES PRODUCTS: GROSS VALUE, AUSTRALIA, 1965-66 TO 1969-70 (\$'000)**

Product	1965-66	1966-67	1967-68	1968-69	1969-70
Fish(a)	13,730	12,646	14,179	14,359	15,235
Crustaceans	24,008	24,906	32,755	36,560	34,077
Molluscs (edible)	(b)4,159	(b)6,580	(c)8,036	(d)6,624	(e)8,001
Pearl-shell(f)	291	307	271	237	310
Trochus-shell(f)	2	..	..	1	..

(a) Excludes freshwater fish caught in Queensland. (b) Excludes scallops and mussels in Western Australia. (c) Excludes oysters and mussels in Western Australia and oysters in Tasmania. (d) Excludes abalone and oysters in Western Australia. (e) Excludes mussels in Western Australia. (f) Source: Department of Primary Industry.

**GROSS VALUE OF FISH, BY PRINCIPAL TYPES, 1969-70(a)**  
(\\$'000)

Type of Fish	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Tuna . . . .	1,168	61	3	313	79	1	..	1,624
Snoek . . . .	18	270	..	..	..	166	..	454
Mullet . . . .	728	57	260	29	139	2	3	1,219
Australian salmon . .	243	103	..	186	189	11	..	731
Snapper . . . .	503	146	57	182	62	..	..	950
Morwong . . . .	255	26	..	..	1	..	..	282
Flathead . . . .	698	343	25	..	2	3	..	1,069
Shark . . . .	229	1,099	1	533	104	282	..	2,249
All other species . .	1,647	1,032	(b)1,728	1,631	444	128	47	6,657
<b>Total fish . . .</b>	<b>5,488</b>	<b>3,137</b>	<b>2,074</b>	<b>2,874</b>	<b>1,019</b>	<b>592</b>	<b>51</b>	<b>15,235</b>

(a) A breakdown of value according to species is not available for previous years. (b) Excludes freshwater fish, particulars of which are not available.

In the following table the gross value and local value of fishing and whaling production are shown by States. Because the value of materials used in the course of production is not available for all States it is not possible to show a comparison of net values.

**FISHERIES: GROSS AND LOCAL VALUE OF PRODUCTION**  
**STATES AND NORTHERN TERRITORY, 1965-66 TO 1969-70**  
(\\$'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
<b>GROSS VALUE</b>								
1965-66 . . . .	10,163	4,403	6,086	6,048	15,733	3,300	61	45,794
1966-67 . . . .	10,473	4,980	6,959	6,175	16,525	3,653	82	48,847
1967-68 . . . .	12,028	5,725	7,309	6,993	21,954	4,473	107	58,589
1968-69 . . . .	11,517	5,851	8,089	7,683	23,717	4,864	1,191	62,912
1969-70 . . . .	13,457	5,631	8,034	8,138	19,660	4,043	3,979	62,942
<b>LOCAL VALUE(a)</b>								
1965-66 . . . .	8,555	3,797	5,588	5,294	15,683	2,747	61	41,725
1966-67 . . . .	8,836	4,307	6,436	5,420	16,469	3,024	82	44,574
1967-68 . . . .	10,212	5,153	6,896	6,162	21,805	3,668	107	54,003
1968-69 . . . .	9,984	5,265	7,679	6,773	23,600	4,100	1,191	58,592
1969-70 . . . .	11,504	4,961	7,609	7,186	19,536	3,343	3,979	58,118

(a) Local value is gross value less marketing costs.

**Consumption of edible fisheries products**

Particulars of the estimated supplies of fish, crustaceans and molluscs available for consumption per head of population, in terms of edible weight, are included in the following table. For the purpose of compiling this table, an allowance has been made for the non-commercial fish catch.

**FISHERIES PRODUCTS: ESTIMATED SUPPLIES AVAILABLE FOR CONSUMPTION**  
**AUSTRALIA, 1965-66 TO 1969-70**  
 (lb edible weight per head per annum)

	1965-66	1966-67	1967-68	1968-69	1969-70
Fresh or frozen—					
Fish—					
Australian origin(a) . . . . .	3.3	3.1	3.0	3.4	3.9
Imported . . . . .	3.8	3.3	3.5	3.8	3.6
Crustaceans and molluscs . . . . .	1.5	1.8	2.1	1.3	1.6
Cured (including smoked and salted) . . . . .	0.9	0.6	0.7	1.1	0.8
Canned—					
Australian origin . . . . .	1.1	0.9	0.7	1.1	1.3
Imported . . . . .	2.4	2.4	2.2	2.1	2.0
<b>Total . . . . .</b>	<b>13.0</b>	<b>12.1</b>	<b>12.2</b>	<b>12.8</b>	<b>13.2</b>

(a) Includes an allowance for non-commercial catch of fish; excludes fish exported.

**Overseas trade in fisheries products**

**Edible fisheries products**

**OVERSEAS TRADE IN EDIBLE FISHERIES PRODUCTS: AUSTRALIA**  
**1967-68 TO 1969-70**

	Quantity ('000 lb)			Value (\$'000 f.o.b.)		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
<b>IMPORTS</b>						
Fresh and frozen(a) . . . . .	46,886	52,528	50,270	10,741	13,641	14,274
Smoked, dried and salted . . . . .	8,975	10,329	6,943	2,018	2,395	2,041
Potted and concentrated . . . . .	153	143	219	160	137	166
Canned—						
Herrings . . . . .	4,676	4,429	4,233	1,095	1,136	1,160
Salmon . . . . .	11,226	10,601	9,857	6,681	6,485	7,387
Sardines and pilchards . . . . .	6,260	6,101	6,139	2,306	2,411	2,442
Tuna . . . . .	258	278	403	93	100	151
Other fish . . . . .	2,241	2,275	2,462	749	785	954
Crustaceans and molluscs . . . . .	2,085	1,841	1,882	1,764	1,474	1,664
<b>Total, canned . . . . .</b>	<b>26,746</b>	<b>25,525</b>	<b>24,976</b>	<b>12,688</b>	<b>12,391</b>	<b>13,758</b>
Products not elsewhere included . . . . .	2,634	2,886	4,013	1,725	1,930	2,892
<b>Grand total . . . . .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>27,332</b>	<b>30,493</b>	<b>33,131</b>

**EXPORTS**

(Australian produce only; excludes re-exports)

Fresh and frozen(b)—						
Fish . . . . .	296	233	987	116	88	222
Crustaceans and molluscs—						
Rock lobster tails . . . . .	11,016	9,074	8,539	22,540	22,754	19,686
Prawns . . . . .	3,290	6,383	10,560	3,476	7,405	12,135
Other . . . . .	5,648	4,130	3,951	3,740	2,916	3,266
Boiled and frozen crustaceans and molluscs . . . . .	1,136	904	967	1,111	1,139	1,193
Prepared and preserved—						
Fish . . . . .	384	348	479	146	152	202
Crustaceans and molluscs . . . . .	4,259	4,101	3,548	2,376	2,170	1,992
Products not elsewhere included . . . . .	163	125	159	245	275	280
<b>Grand total . . . . .</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>33,750</b>	<b>36,899</b>	<b>38,976</b>

(a) Excludes frozen smoked, which is included in item Smoked, dried, etc.

(b) Excludes frozen smoked, which is included in item Products not elsewhere included.



**Pearls**

Pearls valued at \$436,000 were imported into Australia in 1969-70 (\$201,000 from Japan and \$199,000 from Papua and New Guinea) compared with imports valued at \$720,000 in 1968-69 (\$325,000 from Papua and New Guinea, \$314,000 from Japan).

Cultured pearls exported from Australia in 1969-70 (excluding re-exports) were valued at \$2,589,000 compared with exports valued at \$3,281,000 in 1968-69, the bulk of the exports each year being shipped to Japan. The value of natural pearls exported from Australia in 1969-70 (excluding re-exports) was \$24,000 compared with \$17,000 in 1968-69, the major proportion being shipped to Japan.

**Pearl, etc., shell**

Of the pearl-shell exported in 1969-70, exports valued at \$146,000 were consigned to the Federal Republic of Germany, \$120,000 to the United States of America, \$105,000 to Papua and New Guinea and \$103,000 to Japan.

**OVERSEAS TRADE IN SHELLS: AUSTRALIA, 1967-68 TO 1969-70**

	Quantity ('000 lb)			Value (\$'000 f.o.b.)		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Imports . . . . .	92	141	107	38	38	36
Exports(a)—						
Pearl-shell . . . . .	1,204	1,240	1,479	381	456	574
Other shell (including trochus) . . . . .	79	119	215	15	11	17
<i>Total exports</i> . . . . .	<i>1,283</i>	<i>1,359</i>	<i>1,694</i>	<i>396</i>	<i>467</i>	<i>591</i>

(a) Australian produce only; excludes re-exports.

**Marine animal oils**

Of the whale oil exported in 1969-70, about 60 per cent was exported to the United Kingdom, the remainder going to the United States of America, Netherlands and Norway.

**OVERSEAS TRADE IN MARINE ANIMAL OILS: AUSTRALIA, 1967-68 TO 1969-70**

	Quantity ('000 gal)			Value (\$'000 f.o.b.)		
	1967-68	1968-69	1969-70	1967-68	1968-69	1969-70
Imports—						
Whale oil from—						
Japan . . . . .	261	703	292	170	390	193
Norway . . . . .	607	2	482	433	1	309
South Africa . . . . .	25	16	43	20	11	37
United Kingdom . . . . .	61	34	23	73	34	25
Other countries . . . . .	5	3	3	7	3	4
<i>Total whale oil</i> . . . . .	<i>959</i>	<i>758</i>	<i>843</i>	<i>702</i>	<i>440</i>	<i>568</i>
Cod liver oil . . . . .	94	83	68	81	74	83
Unrefined fish oils . . . . .	73	110	114	54	63	79
Other . . . . .	17	16	22	20	14	23
<i>Total imports</i> . . . . .	<i>1,143</i>	<i>967</i>	<i>1,047</i>	<i>857</i>	<i>591</i>	<i>753</i>
Exports(a)—						
Whale oil . . . . .	1,532	1,315	997	640	502	492
Other . . . . .	1	..	1	2	1	1
<i>Total exports</i> . . . . .	<i>1,533</i>	<i>1,315</i>	<i>998</i>	<i>641</i>	<i>503</i>	<i>493</i>

(a) Australian produce only; excludes re-exports.



## CHAPTER 27

# MINERAL INDUSTRY

Further detailed statistics and information on the subjects dealt with in this chapter are contained in the annual printed bulletins *Non-Rural Primary Industries* issued by this Bureau and in *The Australian Mineral Industry—Annual Review* and other publications issued by the Bureau of Mineral Resources, Geology and Geophysics, which also issues, in conjunction with this Bureau, a quarterly publication, *The Australian Mineral Industry*, comprising two parts—Part 1—Quarterly Review and Part 2—Quarterly Statistics. The annual mimeographed statistical bulletins *Mining Establishments* (replacing the former *Mining and Quarrying*), *Mineral Production* (replacing the former *Minerals and Mineral Products*), *Mineral Exploration*, and *Overseas Participation in Australian Mining Industry* of this Bureau contain economic statistics of the industry prepared and published as soon as possible after the data have been compiled. A monthly statistical bulletin *Minerals and Mineral Products* is issued also, and other current statistics on mining or mine products are contained in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and the *Monthly Bulletin of Production Statistics*.

## GENERAL

### Geology

#### General geology

Most of the western and central part of the Australian continent consists of basement rocks of Precambrian age. Younger Palaeozoic rocks, mostly of geosynclinal origin, form a belt several hundred miles wide extending from north Queensland to Tasmania. Mesozoic platform sediments form a broad zone separating the Palaeozoic and Precambrian rocks and extending from the Gulf of Carpentaria to central New South Wales. Cainozoic rocks occur mainly in Victoria, south-western New South Wales and southern South Australia, and as residual basalt cappings over extensive areas of the Palaeozoic rocks of eastern Australia.

#### Economic geology

Minerals of economic significance occur widely throughout the Precambrian and Palaeozoic rocks of the continent. Palaeozoic mineralisation is perhaps more varied, but the Palaeozoic deposits now being worked are in general smaller than those found in Precambrian rocks. Most of Australia's metallic mineral deposits occur within two broad regions, a region of Precambrian rocks in the west and central areas of the continent and a region of younger Palaeozoic rocks in the east.

The major deposits of metallic minerals, including iron ore, lead, zinc, silver, copper, uranium, nickel, and gold, are contained in the Precambrian rocks of the Australian shield. Smaller deposits of tin, tungsten, tantalum, mica, beryllium, manganese, and cobalt are also contained in these rocks.

The mineralised Palaeozoic rocks contain major deposits of gold, now mostly worked out, and a few large copper and lead-zinc-silver occurrences. Smaller amounts of tin, tungsten, molybdenum, bismuth, antimony, and other metals also occur in these rocks.

Outside these two main categories, however, there are some metallic mineral deposits of considerable economic importance which were formed during the Tertiary Period. These include bauxite which occurs as a surface capping over rocks of various ages. Extensive deposits of bauxite occur at Weipa on Cape York peninsula in north Queensland, at Gove on the north-eastern tip of the Northern Territory, in the Darling Range in Western Australia, and near Kalumburu in the north-west of Western Australia. These deposits are the result of a long period of weathering.

Mineral sands, another important exception, contain rutile, zircon, ilmenite, monazite, and other minerals, and are particularly well developed on the central and northern New South Wales coast, southern Queensland and south-western Western Australia. The deposits of the eastern States are considered to be derivatives of Mesozoic rocks. The Western Australian deposits are thought to be derivatives of the Precambrian granites of the Australian shield.

Occurrences of fuel minerals (coal, oil and natural gas) are characteristically located in former sedimentary basins. Large areas of Australia are covered by these basins, and more than twenty

major sedimentary basins have been identified on the Australian mainland. In addition, sedimentary basins are known to exist in off-shore areas adjacent to the Australian coast. The individual basins range in area from 4,000 to 680,000 square miles and contain marine and continental sedimentary rocks ranging in maximum thickness from 1,000 to about 30,000 feet and including rocks of all ages from Proterozoic to Tertiary.

The main Australian deposits of black coal are in eastern Queensland and New South Wales. Most are Permian in age, and they predominantly have a bituminous rank; both coking and non-coking types occur. The extensive brown coal deposits of Victoria were formed during the Tertiary Period.

Crude oil and natural gas have been found in a number of sedimentary basins. In the Bowen-Surat Basin, Queensland, commercial deposits of oil exist at the Moonie and Alton fields, and commercial deposits of natural gas exist in numerous prospects in the Roma, Surat and Rolleston areas. Gas reserves are present in the Adavale Basin at Gilmore, and in a dozen or so accumulations in the Cooper Basin in South Australia extending into Queensland. In general the oil reservoir rocks in Queensland are of Lower Jurassic age, and the gas reservoir rocks are of Mesozoic and Permian age. In the Gippsland Basin, off-shore Victoria in the Bass Strait, oil in considerable quantities was discovered in the Kingfish and Halibut fields, oil and natural gas in the Marlin and Barracouta fields, and natural gas in the Snapper field. In the same basin, significant deposits of hydrocarbons were encountered in the Flounder, Tuna, Bream, and Emperor prospects. In the Gippsland Basin, the Cretaceous and Tertiary strata are the reservoir rocks. In the Cooper Basin, South Australia, commercial deposits of natural gas were discovered at Gidgealpa and Moomba, and also at Daralingie, Toolachee, Merrimelia, Della, Strzelecki, Packsaddle, Mudrangie, and gas and oil at Tirrawarra and Moorari. The reservoir rocks are of Permian age. In the Carnarvon Basin, Western Australia, commercial crude oil mainly in the Cretaceous formations, and also to a lesser degree in the Jurassic, was discovered at Barrow Island. Off-shore, significant hydrocarbon shows have been discovered in Lower Cretaceous rocks at Legendre. Further south, in the Perth Basin, natural gas in commercially significant quantities was discovered in the Yardarino, Gingin, Dongara and Mondarra prospects, the reservoir rocks being of Lower Jurassic, Lower Triassic and Permian ages. In the off-shore Bonaparte Gulf Basin high pressure natural gas was encountered at the Petrel prospect. In the Amadeus Basin, Northern Territory, natural gas was discovered in commercial quantities in formations of Ordovician age at Mereenie and Palm Valley. The gas accumulation in the Mereenie Anticline is underlain by the oil column in the same Pacoota Sandstone reservoir.

Of the non-metallic minerals, many occur in, or were formed from, rocks of various ages. The most important are asbestos, clays, sand and gravel, limestone, gypsum, and silica. Salt won by evaporation of sea water is another important product.

Opals are found in the flat-lying sedimentary beds of the Great Artesian Basin in Queensland, New South Wales and South Australia. These opal deposits were formed during the Tertiary Period.

A table showing most of the larger mineral deposits now being mined in Australia according to the age of the geological formation in which they are found is shown in Year Book No. 53, page 1062.

### Mineral resources

Australia is self-sufficient in most minerals of economic importance and much more than self-sufficient in some. The following table summarises, in a general way, known reserves and production of the principal metals and minerals in relation to Australian consumption of these commodities and present export availability. Many qualifications are necessary to a simple summary of this kind, and the table should be read in conjunction with the following detailed notes on principal minerals.

#### RESERVES OF MINERALS: AUSTRALIA

(Source: Bureau of Mineral Resources, Geology and Geophysics)

<i>Production</i>	<i>Reserves adequate</i>	<i>Reserves uncertain</i>	<i>Reserves negligible</i>
Production sufficient for domestic demand and exports	Barite Bauxite Cadmium Coal (black) Copper Gold Gypsum Iron ore Lead	Beryl Talc Tantalite	



# MINERAL RESOURCES

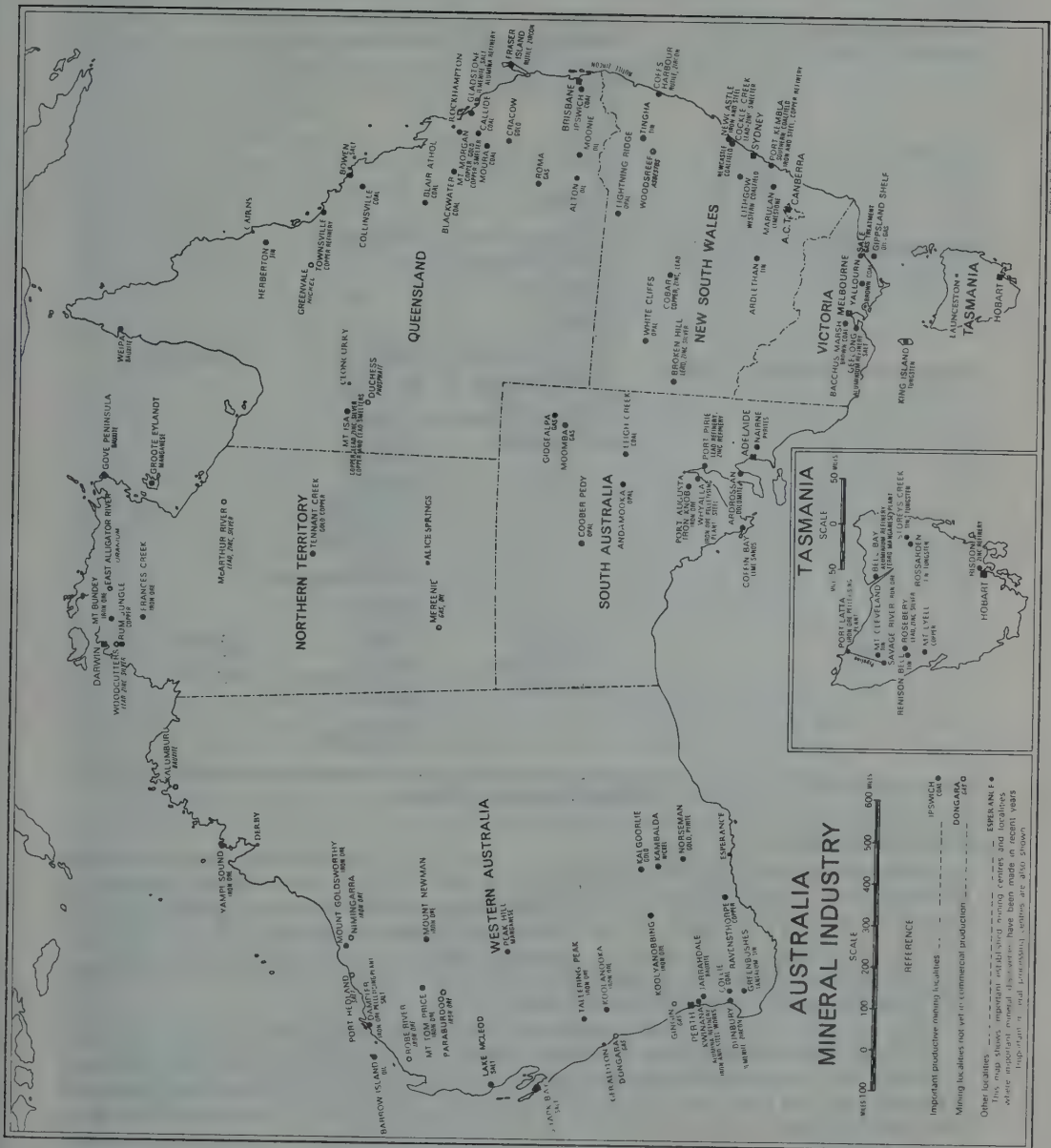


PLATE 46

## RESERVES OF MINERALS: AUSTRALIA—continued

<i>Production</i>	<i>Reserves adequate</i>	<i>Reserves uncertain</i>	<i>Reserves negligible</i>
Production sufficient for domestic demand and exports	Bismuth Manganese ore (metallurgical) Mineral sands(a) Nickel Opal Salt Silver Tin Tungsten Zinc	Glass sands Antimony	
Production sufficient for domestic demand	Clays (except light grade china clay) Coal (brown) Dolomite Felspar Limestone	Sillimanite	
Production not sufficient for domestic demand	Asbestos (chrysotile) Lithium minerals Phosphate rock Sulphides (as source of sulphur)	Abrasives Bentonite China clay Chromite Cobalt Diatomite Fluorite Magnesite Manganese ore (chemical) Mercury Mineral pigments Petroleum Platinum	Molybdenum
Production nil	Magnesium Potassium salts Vanadium	Arsenic Asbestos (crocidolite) Diamonds Graphite Vermiculite	Borates Nitrates Sulphur

(a) Ilmenite, monazite, rutile, zircon.

**Individual minerals**

**Aluminium.** As a result of recent discoveries at Weipa, Gove, in the Darling Range, and in the Kimberley area, Australia's reserves of bauxite are known to be very large, perhaps the largest in the world. Total reserves at Weipa are believed to be in excess of 3,000 million tons, while the deposits at Gove are reported to contain up to 250 million tons of bauxite. In the Darling Range, reserves of economic grade bauxite are estimated to exceed 800 million tons spread over several locations. Another significant deposit of over 200 million tons has so far been proved in the Mitchell Plateau area in the Kimberley district of Western Australia.

**Coal.** Australia has coal resources adequate to provide for future domestic requirements and a substantial export surplus. These resources include coal of all types, except pure anthracite. Australia's coal reserves are concentrated mainly in the mainland eastern States. The bituminous coal is located mainly in New South Wales and Queensland; Victoria has very substantial brown coal reserves in the Latrobe Valley. A table showing Australian coal reserves is published in Year Book No. 53, page 1065.

**Copper.** The principal deposit of this metal is at Mount Isa, where ore reserves were estimated at 120 million tons in 1970. Other important deposits are situated at Cobar, New South Wales, Mount Morgan, Queensland, Mount Lyell, Tasmania and Tennant Creek, Northern Territory.

**Crude oil.** Recent exploration and development activity indicates that Australia has substantial reserves of crude oil and that additional reserves may be discovered in the near future as exploration activity finds further drilling prospects, particularly in the off-shore areas. The Moonie and Alton fields in Queensland, and the Barrow Island field in Western Australia have been producing since

1964, 1966 and 1966 respectively. The Barracouta and Halibut fields in the off-shore Gippsland Shelf area in Victoria commenced production in 1969 and 1970 respectively. Production from the nearby Kingfish field commenced in April 1971. At the end of 1970, recoverable reserves in Australia were estimated to be 1,749 million barrels and the recent discoveries indicate the possibility of an upward revision of this figure in the near future.

**Gold.** Australia's gold resources are heavily concentrated in Western Australia, mainly in the Kalgoorlie-Coolgardie area, but small deposits of gold-bearing ore occur in all States. In addition, gold is commonly obtained as a by-product of other mining activities, particularly copper mining. Economic gold ore reserves at Kalgoorlie were estimated at 7.2 million tons in 1970, with a gold content of 4.05 dwt per ton.

**Iron ore.** In recent years very extensive deposits of iron ore have been discovered in Australia. These discoveries have established Australia as one of the most important iron ore provinces in the world. The largest deposits are located in the Hamersley and Ophthalia Ranges of north-west Western Australia. Other commercially important deposits of iron ore are situated in the Savage River area of Tasmania, in the Middleback Ranges of South Australia, in the Mount Goldsworthy area, and at Yampi Sound, Koolyanobbing, and Koolanooka in Western Australia, and at Mount Bundey and Frances Creek in the Northern Territory. These deposits are adequate to supply the estimated needs of the Australian iron and steel industry far into the future, as well as providing a large export availability. Total Australian reserves with an iron content greater than 50 per cent are estimated to be more than 20,000 million tons.

**Lead-zinc.** Australia has been a major producer of lead and zinc since the discovery of ore at Broken Hill, New South Wales in 1883. Measured reserves of lead-zinc ore at Broken Hill are currently 17.1 million tons assaying 11 per cent lead and 11 per cent zinc. Reserves at another major producing mine, Mount Isa in Queensland, are 52 million tons assaying 7 per cent lead, 6 per cent zinc. Preparations are now being made to start production from a new mine near Mount Isa with reserves of 35.0 million tons of ore, assaying 8 per cent lead and 10 per cent zinc. The capacity of the mine at Rosebery in Tasmania (reserves of 9.3 million tons, 6 per cent lead and 18 per cent zinc) is being increased. Definite proposals for the development of McArthur River in Northern Territory (reserves of 200 million tons, 4 per cent lead and 9 per cent zinc) have not yet been announced. During 1970, a new deposit was discovered at Tarago, near Goulburn, N.S.W.; reserves are initially estimated at 7 million tons assaying 3.3 per cent lead, 9.4 per cent zinc and 2.9 per cent copper. Reserves also exist at Cobar, New South Wales, Beltana, South Australia, and Brown's Prospect and Woodcutters, Northern Territory.

**Manganese.** Australia's known reserves of manganese, which is highly important for the iron and steel industry, are in excess of domestic requirements, and exports have increased sharply in recent years. The principal deposits currently being worked are in the Pilbara area of Western Australia and on Groote Eylandt in the Gulf of Carpentaria. Reserves on Groote Eylandt are substantial.

**Mineral sands.** Ores of titanium (rutile and ilmenite), zirconium (zircon) and thorium (monazite) occur in mineral sands over extensive areas of the north and central coasts of New South Wales, the south and central coasts of Queensland, and the south-western corner of Western Australia. Resources are large by world standards and easily workable. Australia's reserves of rutile and zircon represent a large proportion of the world's reserves of these minerals. In 1970 Australia was responsible for about 90 per cent of the world's supplies of rutile, 85 per cent of zircon, 50 per cent of monazite and 25 per cent of ilmenite. With the cessation of rutile mining operations in Sierra Leone, Australia is now supplying about 98 per cent of the world requirements.

**Natural gas.** Significant discoveries of natural gas have been made throughout Australia, the most notable being the Barracouta, Marlin, and Snapper fields with combined reserves of 8.5 U.S. trillion cubic feet, at least a dozen fields in the Cooper Basin in South Australia with cumulative recoverable reserves in excess of 3 U.S. trillion cubic feet, and numerous small fields in the Roma, Surat and Rolleston areas in Queensland with combined reserves of 350 U.S. billion cubic feet. Commercial production is being undertaken from the Barracouta, Marlin, Gidgealpa, Moomba and Roma fields. Total daily gas production at the end of 1970 was of the order of 170 million cubic feet. To these commercial fields must be added the significant discoveries at Yardarino, Gingin, Dongara and Mondarra in Western Australia where reserves are estimated at 500 U.S. billion cubic feet and the reserves of 1.6 U.S. trillion cubic feet at Mereenie and Palm Valley in the Northern Territory. At the end of 1970, the total reserves of natural gas in Australia, excluding Papua and New Guinea, were estimated at 13.8 U.S. trillion cubic feet.

**Natural gas liquids.** The production of natural gas liquids in association with natural gas is becoming an important facet of Australian petroleum production. Natural gas liquids, also known as condensate, are produced in association with gas from the Barracouta, Marlin, Gidgealpa and Moomba fields and to a lesser degree at Roma. Natural gas liquids from Barracouta and Marlin are



separated from the gas at the Dutson gas and crude stabilisation plant and piped to Westernport Bay for shipment to local and export markets. As yet, the liquids extracted from the Gidgealpa and Moomba gas are not used commercially. The liquids produced at Roma, because of their small quantity, are mainly used as fuel on the producing fields. At the end of 1970, reserves of natural gas liquids in Australia, excluding Papua and New Guinea, were estimated to be 274 million barrels.

*Nickel.* In the Kalgoorlie region of Western Australia a number of nickel sulphide ore bodies have been discovered since 1966. Reserves contained in more than 14 separate ore bodies total more than 27 million tons averaging 3 per cent nickel. Large lateritic nickel deposits have been discovered at Greenvale and Marlborough in Queensland; plans to develop the Greenvale deposits were announced in early 1970.

*Phosphate.* Accelerated search for phosphate rock commencing in late 1964 resulted in the discovery of major deposits in north-west Queensland in 1966. Detailed assessment and feasibility studies have yet to be completed.

*Tin.* The main deposits of tin now being exploited are in the Herberton field inland from Cairns, Queensland; north-west and north-east Tasmania; in the Pilbara region and in the south-west of Western Australia; and at Mt Tallebung, Gibsonvale, Ardlathan and in the New England area, in New South Wales. As the result of exploration and expansion of known deposits in recent years, Australia is now a net exporter of this metal.

*Tungsten.* The main deposits of tungsten ores are in north-eastern Tasmania (wolfram) and on King Island (scheelite). Australia's own requirements are small, and production is principally for export.

*Uranium.* In 1967, the Minister for National Development announced a partial embargo on exports of uranium from Australia, which was designed to conserve known resources while encouraging exploration for new deposits. The policy represented a liberalisation of former policies in that prospecting companies were given an assurance in advance that approval would be given to export specified quantities of uranium from existing or newly discovered deposits, depending on their size and date of discovery. Stated reserves amounted to 11,620 short tons of uranium oxide reasonably assured and a further 3,230 short tons possible but not proven; of these reserves, 10,660 short tons were said to be economically recoverable within the price range \$5 to \$10 per pound and 4,190 short tons economically recoverable within the price range \$10 to \$30 per pound. A marked increase in exploration activity following the relaxation of export restrictions has resulted in several important discoveries. At Mary Kathleen in north-west Queensland, an extensive programme of diamond drilling is reported to have significantly extended previously known reserves, while at Westmoreland also in north-west Queensland a preliminary assessment of recently discovered deposits suggests that total reserves could exceed those at Mary Kathleen. During 1970, three large deposits were discovered in the East Alligator River area of the Northern Territory. Preliminary estimates suggest that two of the deposits could each contain more than the total of previously known uranium reserves in Australia. As a result of these important discoveries, quantitative restrictions on exports were lifted in February 1971. Other important areas of exploration are Mount Painter and Lake Frome in South Australia, Rum Jungle and South Alligator River in the Northern Territory and the Kimberley region of Western Australia.

## Administration

For all practical purposes all mineral rights in Australia are vested in the Crown. In the States, sovereign rights are held by the State Governments with respect to mineral resources within their boundaries. In the Territories of the Commonwealth these rights are vested in the Commonwealth Government. The Commonwealth Government is able also to influence over-all development and production activity in the mineral industry by virtue of its statutory powers with respect to international trade, customs and excise, taxation, and loan raisings. Certain specially formed bodies such as the Joint Coal Board and the Australian Atomic Energy Commission have been given administrative responsibility in defined areas.

### Control of mining

Each State or Territory in the Commonwealth has its own mining Acts or Ordinances and regulations governing the prospecting for and working of mineral deposits. These Acts, etc. are similar in principle, but differ in detail. They all make provision for miners' rights to prospect and for small mining leases for mineral production. The principles embodied in these Acts, etc. were established many years ago when mining operations were generally small scale and labour-intensive. Although amendments have been enacted to modernise the legislation, it is generally inadequate for the large



scale capital-intensive operations often involved with modern mineral development. For this reason a large enterprise may take the course of acquiring mining titles by negotiation with the appropriate Minister for Mines and having the agreed terms and conditions embodied in an Act of the State Parliament. This method of acquisition has been used in several cases where the leasing company undertook an obligation (such as the erection of a large treatment works) in return for leases over large areas for a long period, and has become more common in recent years (e.g. iron ore in Western Australia, coal and bauxite in Queensland, bauxite in the Northern Territory).

In January 1971 a Committee of Enquiry reported to the Western Australian Government on means of bringing the *Mining Act*, 1904 up to date. In April 1971 the Premier announced that the Western Australian Government intended to implement the recommendations of the Committee of Enquiry. The Queensland Parliament passed a new *Mining Act* in 1968 which was simpler but more suited to modern conditions than the *Mining Acts* 1897 to 1967. At April 1971 the 1968 Act had not been brought into operation. In March 1971 a new Mining bill was introduced into the South Australian Parliament for the same purpose but at April 1971 had not been passed.

The following table sets out particulars of the areas occupied under mining Acts and Ordinances in the several States and Territories at 31 December 1966 to 1970. These figures exclude data relating to exploration licences, etc., covering the large areas referred to in the next section below. Also excluded are areas occupied under petroleum exploration and development titles, particulars of which are shown in the table on page 902.

AREAS OCCUPIED UNDER MINING ACTS AND ORDINANCES<sup>(a)</sup>  
STATES AND NORTHERN TERRITORY, 31 DECEMBER 1966 TO 1970  
(<sup>0</sup>000 acres)

Year	N.S.W. <sup>(b)</sup>	Vic.	Qld <sup>(c)</sup>	S.A. <sup>(b)</sup>	W.A.	Tas.	N.T. <sup>(b)</sup>	Total
1966	1,083	84	2,591	97	343	54	36	4,289
1967	1,177	74	2,304	98	372	60	37	4,121
1968	1,146	615	2,618	99	705	66	43	5,290
1969	1,397	626	2,607	97	1,471	54	93	6,345
1970	1,495	2,319	3,568	121	4,512	60	97	12,172

<sup>(a)</sup> Excludes areas held under special arrangements; see following text.  
under miners' rights and dredging claims.

<sup>(b)</sup> At 30 June.

<sup>(c)</sup> Excludes lands held

### Control of exploration

This section refers in general to the exploration for all types of mineral deposits in Australia. Additional information relating to the search for petroleum is set out in the following section.

As a result of the introduction of large-scale modern prospecting methods (particularly air-borne prospecting), the small prospecting areas referred to in the previous section were found to be unsuitable in some instances, and steps have been taken in the States and Territories to ensure the availability of large areas for prospecting by interested persons. Large areas may be made available by provision within the Mining Acts or Ordinances for the issue of authorities to prospect over an area defined by a written agreement which also sets out provisions as to the amount of money to be spent, methods of prospecting, tenure of the agreement, etc.

The tenure of such areas is limited, usually to one or two years only, and, if renewed for a further period, is only over an area selected from the larger area as a result of work done during the life of the initial agreement. It does not give the holder any rights over, or authorities to prospect on, land already held under a mining title within the agreed area. Unless specifically stated in an agreement, the discovery of minerals, whether inside or outside an area covered by an authority to prospect, gives the discoverer no legal rights except the right to apply for a mining lease over the area in which the discovery was made. Suitable prospects are converted to mining tenements by making application for lease under the appropriate mining Act.

### Control of petroleum exploration

*On-shore.* In Australia, all petroleum is, and shall be deemed always to have been, the property of the Crown. Consequently, full control of petroleum mining rights is vested in the Government or Administration of each State or Territory. Any company, organisation or individual proposing to undertake petroleum exploration or development must first satisfy the Government concerned that the necessary financial and technological resources are available to carry out the operation.

There are three main types of petroleum titles:

- (a) the permit, covering initial geological, geophysical and exploration drilling;
- (b) the licence (in Victoria only), which covers detailed surveys and drilling; and
- (c) the lease, which covers development operations and production.

Further details of the petroleum legislation are given in Year Book No. 55, pages 996 and 997.

*Off-shore.* The *Petroleum (Submerged Lands) Act 1967* is the instrument whereby the control and safeguarding of the exploration and exploitation of petroleum resources on the territorial sea-bed and on the continental shelf are assured. Complementary legislation has been passed by each State Government and by the Federal Government.

The legislation provides for a two-stage system of titles: the exploration permit, which covers all forms of exploration including drilling, and the production licence, which covers development and exploration. Royalty is generally shared between State and Federal Governments on a 60 : 40 basis; however, overriding royalty is payable to the State under certain conditions. Mineral royalty receipts of Governments under these Acts are included in the table on this page. For full details of the off-shore legislation, see Year Book No. 55, pages 997-8.

The table following shows details of areas occupied under both on-shore and off-shore petroleum exploration and development titles at 31 December 1966 to 1970.

**AREAS OCCUPIED UNDER PETROLEUM EXPLORATION AND DEVELOPMENT  
TITLES: STATES AND NORTHERN TERRITORY, 31 DECEMBER 1966 TO 1970**  
(<sup>'000</sup> acres)

Year	N.S.W.(a)	Vic.	Qld	S.A.(a)	W.A.	Tas.	N.T.(a)	Total
1966	113,276	31,174	389,252	237,649	429,994	34,800	239,519	1,475,664
1967	83,893	32,348	252,213	240,791	426,107	37,979	221,666	1,294,997
1968	96,522	37,585	297,671	207,260	317,497	34,905	99,505	1,090,945
1969	88,174	36,636	269,150	212,188	298,888	37,433	74,472	1,016,941
1970	72,430	31,528	370,603	206,862	n.a.	37,433	39,375	n.a.

(a) At 30 June.

### Mineral royalties

The collection by governments of royalties for the production of minerals within their area of authority is an internationally accepted practice. In Australia the responsibility for mineral royalties is largely a State concern, and all States currently collect some form of mineral royalty payments. In the past most States have relied on an established system of standard rates which were uniform for all producers of any particular mineral in the State concerned. These charges were either a fixed monetary amount per ton (e.g. 5c per ton on gypsum mined in New South Wales) or an *ad valorem* royalty (e.g. 1.5 per cent of gross value of gold produced in New South Wales).

In recent years there has been an important basic change in the system of establishing royalty commitments, and it is now quite common for State Governments to negotiate special royalty rates with companies which are seeking mineral leases for large scale developments. These royalty rates may vary, depending on whether production is for export or for domestic processing. The rates for a particular mineral may also vary between producers. Important examples of this type of royalty agreement are the iron ore development agreements in Western Australia and coal development agreements in Queensland. Mineral royalties received by Governments in recent years are shown in the table below.

**MINERAL ROYALTY RECEIPTS: GOVERNMENTS, 1965-66 TO 1969-70**  
(<sup>\$</sup>)

	1965-66	1966-67	1967-68	1968-69	1969-70
New South Wales(a)	24,790,851	16,806,842	11,685,378	9,795,466	13,557,543
Victoria(b)	546,117	597,639	662,820	(c)687,429	(c)2,735,721
Queensland(a)	1,293,150	2,354,874	1,843,651	1,687,603	3,038,539
South Australia	985,560	1,091,582	1,036,552	1,254,295	1,556,721
Western Australia	478,294	2,639,894	6,237,593	11,000,716	15,700,090
Tasmania(d)	72,752	86,958	87,413	(e)251,319	(e)423,546
Northern Territory	88,728	110,597	290,810	283,382	449,362
Commonwealth	6,021	10,126	8,729	(c)11,232	(c)491,656

(a) Includes royalty on sand and gravel from Crown lands. (b) Includes royalty on brown coal paid by State Electricity Commission. (c) From 1968-69 includes royalties received under the *Petroleum (Submerged Lands) Act, 1967-68*. (d) Includes rent and fees from mineral lands. (e) From 1968-69 includes royalties on iron ore.

### Control of exports

The Commonwealth Government maintains export controls over certain minerals and metals. These controls are enforced by means of Customs (Prohibited Exports) Regulations as amended from time to time by Statutory Rules. The Commonwealth authorities having jurisdiction over mineral and metal exports, together with the relevant products, are listed below. A clearance to export is needed in each case.

*Department of National Development*—iron ores, beneficiated iron ores and iron concentrates; mineral sands (whether treated or untreated), and concentrates of mineral sands, containing zircon, rutile or ilmenite; manganese ores; beryllium ores and concentrates; tin ores and concentrates, refined tin in the form of ingots or in any other refinery form, and any of the following materials from which tin may be obtained, being materials resulting from the refining of tin, that is to say, residues, slag, dross, dust and other wastes; copper matte, blister copper, copper scrap, copper refinery shapes; copper alloys in the form of ingots, billets, etc.; copper alloy scrap; any of the following materials from which copper may be obtained, that is to say, residues, speiss, slag, dross, scale, sweepings, ash, sludge, slime, dust and wastes; and natural gas.

The Minister for National Development announced on 20 January 1970 that the export of natural gas would be subject to control in order to conserve supplies for local use. Export will be permitted only from fields remote from significant local markets. On 24 February 1971 the Ministers for National Development and Customs and Excise announced the introduction of minimum export price controls for zircon.

*Department of Primary Industry*—phosphate rock, phosphate and superphosphate, and fertilisers containing phosphate or superphosphate.

*Australian Atomic Energy Commission*—minerals, raw and treated (including residues and tailings) containing more than 0.05 per cent of uranium or thorium, singly or together; uranium and thorium minerals including pitchblende and monazite; uranium, thorium, beryllium and lithium metals, compounds and alloys; hafnium-free zirconium metal, alloys and compounds; nickel metal in certain forms.

### Joint Coal Board

The Joint Coal Board was established in 1946 under joint legislation of the Commonwealth and of the State of New South Wales to carry out special administrative functions in regard to the New South Wales black coal mining industry. A summary of these functions is given below.

- (i) To ensure that coal is produced in the State of New South Wales in such quantities and with such regularity as will meet requirements throughout Australia and in trade with other countries;
- (ii) to ensure that the coal resources of the State are conserved, developed, worked and used to the best advantage in the public interest;
- (iii) to ensure that coal produced in the State is distributed and used in such manner, quantities, classes and grades, and at such prices as are calculated best to serve the public interest and secure the economical use of coal and the maintenance of essential services and industrial activities; and
- (iv) to promote the welfare of workers engaged in the coal industry in the State.

### Australian Atomic Energy Commission

During 1953, Commonwealth legislation was enacted to set up an Atomic Energy Commission which is responsible, in an overall sense, for the production and utilisation of uranium in Australia. This Act, the *Atomic Energy Act 1953*, superseded the *Atomic Energy (Control of Materials) Act 1946*, but retains a provision of that Act which provides for the control of substances which could be used for production or use of atomic energy.

The functions of the Commission fall under two main headings. Firstly, it is responsible for undertaking and encouraging the search for and mining of uranium and is empowered to co-operate with the appropriate authorities of the States in connection with these and related matters. Secondly, it is authorised to develop the practical uses of atomic energy by constructing and operating plant for this purpose, carrying out research and generally fostering the advancement of atomic energy technology. The Commission operates under the direction of the Minister for National Development.

## Government assistance

The Commonwealth Government and the various State Governments provide assistance to the mineral industry in a variety of ways. The main forms of assistance are discussed next page.



### Commonwealth Government Assistance

Assistance provided by the Commonwealth Government takes the form of income taxation concessions, subsidies, bounties, and technical assistance mainly through the work of the Bureau of Mineral Resources and the Commonwealth Scientific and Industrial Research Organization. A table showing direct Commonwealth Government payments to sectors of the mineral industry is included on page 907.

*Income taxation concessions.* One-fifth of the net income derived from mining for prescribed minerals in Australia or the Territory of Papua and New Guinea is exempt from tax. Principal minerals to which this concession applies are as follows: asbestos, bauxite, radio-active ores, rutile and zircon; and ores of copper, nickel and tin.

Income derived from mining principally for gold in Australia or the Territory of Papua and New Guinea is exempt from tax. The exemption is also available in respect of income derived from mining principally for gold and copper if the value of the gold obtained is not less than 40 per cent of the value of the total output.

Dividends paid wholly and exclusively out of exempt mining income are also exempt from tax.

One third of call moneys paid by resident and non-resident investors on non-redeemable shares in a company, whose principal business is mining or prospecting for minerals in Australia or the Territory of Papua and New Guinea, is allowable as a deduction from the investors' assessable income. Where the shares in such a company are issued after 9 May 1968, the deduction is dependent upon the company lodging a declaration that the call moneys have been, or will be, expended exclusively on the search for minerals (including petroleum) obtainable by mining.

Other valuable assistance has been given in the form of certain taxation concessions to encourage the search for petroleum and other minerals. Resident investors are permitted, for tax purposes, to deduct from their assessable income all application, allotment and call moneys paid for shares issued by petroleum exploration companies or companies engaged in prospecting or mining for other minerals obtainable by mining. These deductions are allowable only if the company elects to forgo an equivalent amount of the special deductions for capital expenditure to which it would otherwise be entitled. Many companies engaged in exploring for petroleum and other minerals have elected to pass on this benefit to their shareholders.

Special deductions for capital expenditure incurred in the discovery and mining of petroleum are allowable to a company deriving income from the sale of petroleum, and products of that petroleum, mined by the company in Australia or the Territory of Papua and New Guinea. A company is entitled to these deductions only when it produces Australian petroleum in commercial quantities. The general effect of the deductions is to free the proceeds from the sale of Australian or Territory petroleum and its products from tax until all allowable capital expenditure has been fully recouped. Dividends paid wholly and exclusively out of profits so freed from tax are exempt.

Capital expenditure allowable to petroleum exploration companies includes, broadly, the cost of exploratory surveys, drilling and well-head plant, access roads and expenditure on housing and welfare.

A company mining or prospecting for minerals other than petroleum and gold may also be allowed special deductions for capital expenditure. Broadly, allowable capital expenditure includes expenditure on exploration and prospecting, preparation of a site for extractive mining operations, buildings, other improvements and plant necessary for those operations, access roads, certain treatment plant and housing and welfare.

The allowable capital expenditure of a general mining company may be deducted over the life of the mine, or twenty-five years, whichever is the lesser. Alternatively, the mine owner may elect to have the allowable capital expenditure deducted in the year it is incurred or, where appropriations have been made for such expenditure to be incurred in the following year, the deduction may be allowed in the year of the appropriation. Annual deductions for depreciation on mining plant may be allowed in lieu of spreading the cost over the life of the mine. Expenditure on housing and welfare may, at the option of the mine owner, be allowed over the life of the mine, or five years.

Special deductions are allowable for capital expenditure incurred on certain transport facilities used primarily and principally in relation to minerals mined in Australia, for the transport of raw minerals and certain specified products obtained from the processing of such minerals, or for transporting petroleum between the oil or gas field and a refinery or other terminal. The special deduction applies to expenditure incurred on a railway, road, pipe-line or similar transport facility. Allowable expenditure on transport facilities is deductible in equal annual instalments over a period of ten years.

*Petroleum search subsidy.* In 1957 the Commonwealth Government introduced the *Petroleum Search Subsidy Act 1957* whereby stratigraphic drilling operations were subsidised to the extent



of 50 per cent of cost. An amendment in 1959 widened the scope of operations for which subsidy was offered to include all types of geophysical surveys and off-structure drilling. Subsidy payments under the Act for the years 1966 to 1970 are shown in the table on page 907.

Various amendments to the Act have altered the amount of subsidy and the type of operations to which a subsidy is applicable. The most recent amendment in 1969, provides for the payment of subsidy for approved operations completed before 30 June 1974. On-shore operations, both exploration drilling and geophysical, are subsidised at the rate of 30 per cent of approved costs. All similar off-shore operations are subsidised at a rate dependent upon the Australian financial contribution to the operation, the maximum rate being 30 per cent for operations wholly financed by Australian companies. Details of earlier amendments are given on page 1001 of Year Book No. 55.

*Pricing of Australian crude oil.* Early in 1965 the Tariff Board conducted a public inquiry to determine an appropriate price for Australian crude oil, having regard to the Commonwealth Government's desire to encourage the search for oil and the consequent need to offer sufficient incentive to exploration companies. At the same time the Government indicated that it was anxious to prevent or minimise increased costs of petroleum products to consumers and to ensure that refineries using Australian crude oil were not detrimentally affected in relation to other refineries. Evidence was heard from oil exploration, marketing and refining interests, government officials, coal and power interests, and major users of refined petroleum products. The Tariff Board recommended at that time that Moonie crude oil should be valued at \$A2.69 a barrel at the nearest refinery centre, which included a variable differential related to the quality of the oil and an incentive of 22.4 cents per barrel. The Government adopted the Tariff Board's recommendations, and raised the incentive margin to 67 Australian cents a barrel; this margin to apply to all Australian crude oil producers.

To ensure that indigenous crude oil is used to the maximum extent in Australian refineries, the Government also adopted the Tariff Board's recommendation to impose penal import duties of 0.8 cents a gallon on crude oil and 2.4 cents a gallon on motor spirit to be paid by the companies which do not take their share of local crude oil. The share of local crude to be taken will be based on the importer's share of total imports of refinery feedstock or refined products or both.

Any oil found in the Territory of Papua and New Guinea will be covered by these policies in the same way as oil found in Australia.

Under these arrangements the price of Moonie crude is \$A3.14 a barrel delivered Brisbane and Barrow Island field when it commenced production in April 1967 was \$3.24 a barrel delivered Kwinana.

This pricing structure was to remain operative until 17 September 1970.

However, the discovery of very large crude oil reserves in the Gippsland Shelf fields revealed that this pricing structure could result in the Australian consumer paying more for indigenous petroleum products, than for similar products refined from imported crude oils. Following negotiations with the Commonwealth Government the Gippsland Shelf operators agreed to forgo the \$0.67 a barrel incentive, plus a further \$0.05 per barrel. This applied from commencement of production in October 1969 to 17 September 1970. As from 18 September 1970, the price of all Australian crude oils has been based on 'import parity' as at 10 October 1968, the date on which the new arrangements were announced by the Prime Minister in Parliament. This new pricing structure is also for a 5 year period.

Under this agreement the Gippsland crude oil will be priced in the following manner:

	per barrel
	\$
Weighted average posted price as at 10 October 1968 of principal crudes imported into Australia . . . . .	1.62
less weighted average discounts as at 10 October 1968 . . . . .	0.26
	1.36
plus weighted average overseas freights as at 10 October 1968 . . . . .	0.46
Wharfage and other charges as at 10 October 1968 . . . . .	0.07
	1.89
less a deduction for coastal freight . . . . .	0.09
	1.80

The quality differential varies according to changes which occur in the quality of the oil produced.

Moonie crude oil on the same basis, for the five-year period will be \$2.15 per barrel f.o.b. Brisbane, since the coastal freight deduction of 9 cents per barrel does not apply.

Barrow Island crude will be the basic \$1.89 per barrel plus a quality differential of 34 cents, giving the total of \$2.23 per barrel f.o.b. Kwinana.

The Government has announced that the absorption of Australian crude oil by Australian refineries will be Government policy for ten years. The allocations to refining and marketing companies are now based on the sales volume of certain products, and the associated penal duties on imports made by companies not taking up their allocations have been increased to 7.5 cents per gallon on motor spirit, 5 cents per gallon on other refined products and 2 cents per gallon on crude oil.

The Government has also announced that, should the production of Australian crude oil exceed the capacity of the refiners to absorb indigenous crude, the available market will be shared between all producing companies on a formula based on the reserves of each company. Export of the excess crude oil will be permitted.

*Assistance to the gold-mining industry.* Assistance to the gold-mining industry by subsidy was introduced at a time of rising costs in the industry and fixed official world price for gold. Because many producers were faced with the likelihood of closing down, the Government decided to subsidise marginal producers in Australia and the Territories of Papua and New Guinea. Under the *Gold-Mining Industry Assistance Act 1954* a producer, the value of whose gold output exceeded 50 per cent of the total value of his mine output, was eligible for assistance, subject to certain conditions, on the production of gold from 1 July 1954. The assistance scheme has been reviewed on a number of occasions since the Act was originally passed, and some liberalisations have been approved, including increases in the rates of subsidy payable authorised in amendments passed in 1957, 1959 and 1965.

Under the Act as it now stands the subsidy payable to small producers whose annual deliveries do not exceed 500 fine oz is \$6 per fine oz, irrespective of cost of production. For large producers, subject to certain provisions, the rate of subsidy payable is an amount equal to three-quarters of the excess of the average cost of production over \$27 per fine oz, with a maximum amount of subsidy of \$8 per fine oz. A producer whose deliveries during the year exceed 500 fine oz may elect to be treated as a small producer. In this case the subsidy rate payable per fine oz on total deliveries is \$6 reduced by 1c for each fine oz by which deliveries exceed 500 fine oz. The benefit under this provision terminates when deliveries in a year reach 1,100 fine oz. Where a producer receives an amount in excess of the official price of \$31.25 per fine oz as a result of sales on overseas premium markets or otherwise, the subsidy payable is, with effect from 1 July 1968, reduced by seventy-five per cent of the amount of the excess. Prior to 1 July 1968 subsidy was reduced by the full amount of the excess.

Payments under the Act will apply to production until 30 June 1973. The amounts paid to gold producers in the various States and Territories of Australia in each of the years 1966 to 1970 are shown in the table on page 907.

*Assistance to the copper mining industry.* After a Tariff Board investigation, assistance was accorded to the industry in 1958, partly by import duty and partly by bounty. Under the *Copper Bounty Act 1958-1966*, bounty was payable when the overseas price was \$580 per ton or less and at a reduced rate up to a price of \$650 per ton on refined copper for use in Australia. The Act lapsed on 31 December 1966. The import duty continues in operation, for imposition when the overseas price of copper falls below \$580 a ton.

*Assistance to the producers of sulphuric acid and iron pyrites.* Following recommendations of the Tariff Board, the *Sulphuric Acid Bounty Act 1954* was extended to 30 June 1965, and then to 31 December 1970. Similarly, the *Pyrites Bounty Act 1960* was enacted to operate to 30 June 1965, and it too was extended to 31 December 1970. The Acts provide for payment of bounty on sulphuric acid produced from prescribed Australian materials, and to producers of iron pyrites. Payments under these Acts for the years 1966-1970 are shown in the table on page 907.

*Payments to producers of phosphate fertilisers.* The *Phosphate Fertilisers Bounty Act 1963-1969* provides for a bounty to be paid on superphosphate and ammoniated phosphate fertilisers manufactured and used in Australia. (This includes approved trace elements, compounds or substances when added to superphosphate). Bounty is payable on the fertiliser value of superphosphate, as measured by its soluble content of phosphorus pentoxide. A standard grade of superphosphate containing approximately 20 per cent soluble content of phosphorus pentoxide qualifies for full bounty of \$12 per ton. If the phosphorus pentoxide content is outside the range of 19.5 to 20.5 per cent, bounty is payable at \$60 per ton of contained phosphorus pentoxide. This same rate is payable on the phosphorus pentoxide content of ammonium phosphate. Bounty on 'double' and 'triple' grade superphosphates is payable in accordance with the phosphorus pentoxide content.

The intention of this Act is to assist consumers of superphosphate (primary producers). The Act is due to expire on 31 October 1971. Payments under the Act, for the years 1966-1970 are set out in the following table.

**COMMONWEALTH GOVERNMENT PAYMENTS TO THE MINERAL  
INDUSTRY: AUSTRALIA, 1966 TO 1970**

(\$'000)

Year	Petroleum exploration (a)	Gold mining(b)	Pyrites mining(c)	Sulphuric acid production (d)	Phosphate fertiliser production (e)
1966	10,154	3,784	288	1,398	25,818
1967	10,327	3,859	46	1,382	25,544
1968	13,805	2,817		1,279	24,907
1969	14,911	1,077		988	31,665
1970	11,237	3,278	90	740	45,820

(a) *Petroleum Search Subsidy Act 1959-69*. Includes payments in the Territory of Papua and New Guinea: see also the table on page 938.  
 (b) *Gold-Mining Industry Assistance Act 1954-1968*. Includes payments in the Territory of Papua and New Guinea.  
 (c) *Pyrites Bounty Act 1960-1969*.  
 (d) *Sulphuric Acid Bounty Act 1954-1969*.  
 (e) *Phosphate Fertilisers Bounty Act 1963-1969*.

*Bureau of Mineral Resources, Geology and Geophysics.* The functions of the Bureau are as follows:

- (i) as a primary function, to obtain, study, publish and provide basic geological and geophysical information necessary for the exploration and development of the nation's mineral resources; this to be done where appropriate in co-operation with State and Territorial authorities;
- (ii) to undertake experimental studies and research into geology and geophysics in order to support the function of obtaining basic information;
- (iii) to make basic investigations of the earth's magnetic and gravitational fields and in seismology and vulcanology;
- (iv) to complement the work of the State and Territorial authorities by undertaking geological and geophysical investigations into the occurrence and distribution of underground water;
- (v) to undertake geological and geophysical investigations on behalf of other Commonwealth Departments and authorities including the provision of resident staff by arrangement with the Territories;
- (vi) to obtain basic information on, and review the mineral resources of the Commonwealth and its Territories; to study the various sectors of the mineral industry both in the national and international spheres; to publish and provide information about the mineral industry;
- (vii) to undertake such investigations in mining engineering and petroleum technology as are relevant to (i) and (vi) above;
- (viii) to prepare advice for Government on the mineral industry, including the exploration and development of mineral resources in the national interest;
- (ix) when directed by Government, to administer schemes for the assistance of sectors of the mineral industry and to undertake special mineral projects.

The Bureau comprises five branches under the Director: Operations, Mineral Resources, Geological, Geophysical, and Petroleum Exploration. The Operations Branch consists of three sections, Planning and Co-ordination, Publications and Information, and Administrative. It carries out central office functions, including planning and control of programme, assessment of results, co-ordination of activities, liaison, and distribution of information. The Mineral Resources Branch comprises the sections Mineral Economics, Mining Engineering, and Petroleum Technology, and is concerned largely with those aspects of the Bureau's work which involve studies of the mineral industry as a whole, and the preparation of advice and reviews for the Government, industry and the public. The Geological and Geophysical Branches are responsible for the principal field activities of the Bureau, and the operation of observatories, while the Petroleum Exploration Branch is concerned with the administration of the *Petroleum Search Subsidy Act 1959-1969* and is also engaged in the assessment of sedimentary basins in Australia and its Territories. The establishment of the Bureau is 627 officers (at 30 June 1971), of whom 308 are professional. The budget for the financial year 1970-71 was \$17.8 million, of which \$10.3 million was provided for payment under the *Petroleum Search Subsidy Act 1959-1969*.

The Bureau maintains laboratories in Canberra and Darwin which are engaged on geochemical geochronological and petroleum technological studies and basic research into the design and testing of geophysical equipment. The Bureau also maintains a vulcanological observatory at Rabaul and



geophysical observatories at Toolangi, Mundaring, Port Moresby, Mawson (Antarctica), and Macquarie Island. The geophysical observatories are engaged in magnetic, ionospheric, and seismic investigations and are base stations for field operations.

*Commonwealth Scientific and Industrial Research Organization.* The activities of this body with respect to the mineral industry are discussed on page 909 under Research.

### State Government assistance

In addition to free assays and determinations of rocks and minerals carried out for prospectors by the Mines Departments of the States and Territories, technical officers of these departments provide advice to the mining and allied industries where required, carry out field examinations of mining prospects, advise on exploration and development, select sites for water supply, and in general give a free technical service to the mining industry.

*New South Wales.* The State Mines Department renders scientific, technical and financial assistance to the mining industry. Grants, which are repayable in the event of pay minerals being discovered, are made to cover half the cost of prospecting and drilling operations. Loans may be made to prospectors and miners for the purchase of plant and machinery. A quantity of equipment is also available for hire in several localities. The Department has itself undertaken a programme of contract drilling to investigate the existence of mineral deposits in the State (including the testing and proving of coal resources). Expenditure on financial assistance in 1969-70 amounted to \$451,200 including \$138,295 on the Department's own drilling programme.

*Victoria.* The Mines Department conducts geological and mineral surveys and produces geological maps and issues scientific and technical reports thereon. Extensive rotary, percussion and auger drilling operations are carried out and in conjunction with these, sedimentary basin studies are made to evaluate petroleum, mineral and groundwater potential. A comprehensive library and a geological museum are maintained and a core library retains cores and cuttings from drilling operations. The administration of petroleum and pipeline legislation ensures the conduct of all petroleum exploration and production operations, on-shore and off-shore, in a safe and effective manner. Technical and drilling assistance and loans or grants are available for mineral exploration and prospecting and for approved development operations. Six stamp batteries provide an ore crushing service to enable test crushings to be made at nominal cost. Information is available on mining law and mineral statistics. Assays of ores, analytical services, advice on metallurgical treatments, industrial pollution and chemical problems are available together with information on the manufacture, handling and use of explosives. Financial assistance is available to municipalities to reclaim mine-damaged land, in areas where a Reclamation Committee recommends such action.

*Queensland.* The Department of Mines provides assistance to mining by way of grants for construction and maintenance of roads in mining areas, repayable advances or subsidies for mine development, hiring of equipment, and assistance to prospectors. The Department maintains a concentration plant for tin ores at Irvinebank, an assay office at Cloncurry, a battery for treatment of gold-bearing ores at Charters Towers, and diamond drilling plants in various parts of the State.

*South Australia.* The Department of Mines provides the following services and facilities to the mineral industry: (i) drilling and testing of mineral deposits, geophysical investigations, well logging, development of sub-surface water supplies for farming, pastoral, irrigation, and mining purposes; (ii) geological examination of mineral deposits, ground water supplies, dam foundation and drainage problems, guidance on mining legislation, and publication and issue of geological bulletins and maps. It also provides, through the Australian Mineral Development Laboratories, facilities for chemical, metallurgical, analytical and assay investigations, testing and treatment of ores and minerals, and petrographic, mineragraphic and radiometric determinations. Pilot scale metallurgical and chemical treatment plants are maintained and operated for the development of mineral extraction processes.

*Western Australia.* Prospectors receive assistance of either \$15 or \$17.50 a week according to the prospecting locality. North of the 26th parallel and within a defined area south of this lying largely outside the agricultural areas assistance is given to the extent of \$17.50 a week. In the remainder of the State prospectors receive \$15 a week. Provision is also made for the supply of some tools required for prospecting. There are sixteen State batteries operating intermittently throughout the goldfields for the treatment of ore from prospectors and small mine-owners at a nominal charge. A cartage subsidy is also granted to such operators sending gold and lead ores to State batteries for treatment. Provision is made for loans to mine-owners who require assistance to develop mines. The Government also has a drilling scheme, financing mine-owners on a \$1 for \$1 basis.

*Tasmania.* The Department of Mines provides financial assistance to mining lessees for the purchase of plant and machinery, for sinking, repairing or de-watering of shafts, for construction of dams and water races, for testing and proving a deposit of any mining product, for developmental work, and for diamond and other types of drilling. The Department has available for hire percussion



and diamond drills for exploration, as well as a complete plant for small shaft sinking and tunnelling. Other assistance is rendered to the industry in the form of geological and engineering advice, through ore-dressing research into metallurgical recoveries, and the selection and design of treatment plant.

*Northern Territory.* To encourage the development of the mining industry the Northern Territory Administration operates two batteries for the treatment of miners' ores. The Tennant Creek battery is currently cyaniding the gold in accumulated tailings while the Mount Wells battery is crushing parcels of tin ores and small quantities of gold, lead, copper, and wolfram ores. The crushing charges are subsidised by government grants. In addition, the Administration provides cartage subsidies and financial advances to encourage miners to carry out mining operations. Assistance is also given to the industry by drilling encouraging prospects. Roads and water supply services are provided and maintained for mines under active development throughout the Territory.

## Research

Research investigations into problems of mining, ore-search, ore-dressing and metallurgy are conducted by Governmental bodies, by universities, by private enterprise, and by combined efforts of these bodies. A summary of their functions follows.

### Australian Atomic Energy Commission

The Australian Atomic Energy Commission conducts research at its laboratories at Lucas Heights in Sydney on the development of nuclear power, including research on nuclear materials and on metals and ceramics used for nuclear power. Research conducted by the Commission is discussed in detail in Year Book No. 55, page 561.

### The Australian Mineral Development Laboratories

Contract research and technical consulting for the mineral and associated industries is undertaken by The Australian Mineral Development Laboratories (Amdel), at Adelaide. This Organisation is controlled by a council comprising representatives of the mineral industry, the South Australian Government and the Commonwealth Government. Extensive facilities are available in the fields of analytical chemistry, mineralogy and petrology, chemical metallurgy and mineral engineering, operations research/computer services and materials technology. Both long and short term applied research is carried out and all investigations are conducted on a strictly confidential basis.

### The Baas Becking Geobiological Research Laboratory

In 1965 the Baas Becking Geobiological Research Laboratory was established in the Bureau of Mineral Resources Building in Canberra, under the joint sponsorship of the Commonwealth Scientific and Industrial Research Organization, the Bureau of Mineral Resources, and the Australian Mineral Industries Research Association (*see* Research by private enterprise, page 910). The broad objective of the research work is to investigate the biological and chemical processes associated with the formation of mineral deposits of the stratiform type.

Initial emphasis is being placed on investigations to establish the relationship of biological factors to the natural physico-chemical environment with particular reference to the possible role of these factors in the formation and transformation of sulphide minerals. Investigations have included the response of micro-organisms to heavy metals; biochemistry and physiology of oxidative and reductive sulphur transformations; role of organisms in the concentration of mineral elements; physico-chemistry of low-temperature mineral synthesis; mobility of sulphides under the influence of temperature and pressure and the interaction of mineral types; and biological leaching of low-grade sulphide minerals.

### Bureau of Mineral Resources, Geology and Geophysics

Mineral research by the Bureau of Mineral Resources is concerned with basic problems of mineral emplacement. Special studies are undertaken of: the sedimentary environment of potentially oil-bearing rocks; the genesis of continental and marine phosphate; the fundamental chemistry of metallic ore deposits; the structural, chemical, and stratigraphic contents of ore deposits; and geophysical interpretation by means of model testing.

For details of the functions of the Bureau of Mineral Resources, Geology and Geophysics, *see* page 907.

### Commonwealth Scientific and Industrial Research Organization

Research for the mineral industry by the Commonwealth Scientific and Industrial Research Organization is undertaken mainly in the Minerals Research Laboratories comprising the Divisions

of Mineral Chemistry, Chemical Engineering and Mineralogy, and a new Section of Mineral Physics. The laboratories are located in Melbourne, Sydney, Perth and Canberra. Current research programmes include:

- (a) Exploration, which aims to increase the efficiency of mineral exploration procedures by studying the ways in which mineral deposits form, and by improving and developing techniques whereby new ore bodies can be located and delineated. This includes projects on nickel mineralisation, veins and lodes, stratiform ores, hydrocarbons, geochemistry, geophysics, and borehole logging.
- (b) Processing and utilisation, which seeks to improve the efficiency of the mining, upgrading, metal extraction and utilisation of Australian ores, and to contribute to the efficient utilisation of Australian fossil fuels. This incorporates work on comminution, physical concentration, flotation, pyrometallurgy, hydrometallurgy, electrometallurgy, mineral sands, iron ores, coal assessment, coal usage, natural gas, gas cleaning, sulphide reactivity and fluidisation.
- (c) Support Studies, to provide an extension of knowledge in areas of present and anticipated mineral interests. In addition to planning and development activities, these cover structure of solids, surface properties, rock physics, sulphide mineralogy, ore-forming solutions, reaction mechanisms and kinetics, thermodynamics, process control, halide metallurgy, non-metallic minerals and general chemical engineering studies.

A significant proportion of the research is supported with funds provided by the industry. The definition of research needs is being examined in co-operation with the Australian Mineral Industries Research Association.

#### National Coal Research Advisory Committee

The functions of the National Coal Research Advisory Committee are to review coal research activity in Australia, to recommend priorities for further activities in this area, and to allocate special Commonwealth funds of \$260,000 per year provided for coal research projects as recommended by the committee. This amount is additional to that expended by C.S.I.R.O. and Commonwealth Departments on coal research. The major beneficiary under this scheme is the Australian Coal Industry Research Laboratories; other beneficiaries are the State Electricity Commission of Victoria (for brown coal research) and the Universities. From 1965 to 1969 special coal research funds of \$520,000 annually were available to the committee, comprising the Commonwealth contribution of \$260,000 matching an equivalent total contribution from State Governments and coal producing and consuming industries. Beginning with the financial year 1968-69 the States and industry are independently sponsoring coal research and development according to their own individual requirements.

#### University Research

The various universities in Australia carry out research into various aspects of the mineral industry such as geology, ore mineralogy and genesis, mining techniques, mineral processing, extractive metallurgy, and materials and metals technology.

#### Research by private enterprise

Most large mining and smelting companies have laboratories dealing with their own individual immediate problems. Private industry has formed the Australian Mineral Industries Research Association, which is composed of fifty-eight members representing a large proportion of the mining, metallurgical and related companies operating in Australia at present. It was set up in 1959, chiefly to represent private industry in the management of the Australian Mineral Development Laboratories, but the Association now finances other research work into geology, mining and ore-dressing at Universities, C.S.I.R.O., and the Australian Mineral Development Laboratories. Expenditure for the year 1969-70 was \$301,778.

In addition, the Association provided \$50,000 to the Australian Mineral Development Laboratories towards the cost of a new building (the second of four such payments) and an advance of \$26,000 to International Technical Services Limited. The latter is a new non-profit consulting company jointly owned by the Association and Battelle Memorial Institute, Columbus, U.S.A. and associated with the Australian Mineral Development Laboratories.

The Australian Coal Industry Research Laboratories were commissioned by private enterprise to carry out research to a value of \$800,800 in the financial year 1969-70, with a further \$40,000 being provided by the Joint Coal Board. These laboratories have been commissioned by four major coal producing groups in New South Wales to carry out work on coal mining strata problems to a value of \$100,000 over the two years 1970-71 and 1971-72, as recommended by the Coal Industry Technical Advisory Committee.

## International relations

Because Australia is a large supplier of certain minerals to the rest of the world and because the welfare of the domestic industry depends to a large extent on the maintenance of a high level of exports, international relations are of considerable importance to the industry, and the Commonwealth Government takes an active role in international consultations and discussions relating to minerals. The most important international commitments are discussed below.

### International Tin Agreement

The First International Tin Agreement (of the post-war period) was in operation for five years from 1 July 1956 to 30 June 1961. This Agreement was subsequently replaced by the Second International Tin Agreement, which came into force provisionally on 1 July 1961 and definitively on 21 February 1962.

This Agreement was for a period of five years and had the following objectives:

- (a) to prevent or alleviate widespread unemployment or under-employment and other serious difficulties likely to arise from maladjustments between the supply and the demand for tin;
- (b) to prevent excessive fluctuations in the price of tin and to achieve a reasonable degree of stability of price;
- (c) to ensure adequate supplies of tin at prices which are fair to consumers and provide a reasonable return to producers; and
- (d) to provide a framework for the consideration of measures to promote the progressively more economic production of tin, while protecting deposits of tin from unnecessary waste or premature abandonment, thus facilitating expansion in world consumption of tin; and to keep under review the long-term need for the development of new deposits of tin.

The Third International Tin Agreement, which came into force provisionally on 1 July 1966 and definitively on 21 March 1967, contains several additional objectives:

- (a) to ensure conditions which will help achieve a dynamic and rising rate of production of tin on the basis of a remunerative return to producers, which will help secure an adequate supply at prices fair to consumers and which will help provide a long-term equilibrium between production and consumption;
- (b) in the event of a serious shortage of supplies of tin occurring or being expected to occur, to take steps to secure an increase in the production of tin and a fair distribution of tin metal at equitable prices.

Although the framework of the Third Agreement is basically that of the Second, objectives have been broadened in line with the principles of the United Nations Conference on Trade and Development (UNCTAD) and, as such, emphasise the need for expansion of export earnings in the developing countries. Thus the emphasis has been shifted from surplus production and export controls inherent in the Second Agreement to one of increased production in the new Agreement.

The Agreement is operated by the International Tin Council, which is made up of the following Governments: Australia, Austria, Belgium, Bolivia, Canada, Czechoslovakia, Democratic Republic of the Congo, Denmark, France, India, Indonesia, Italy, Japan, Korea, Malaysia, Mexico, Netherlands, Federation of Nigeria, Spain, Thailand, Turkey, United Kingdom. Member Governments participate as producing or consuming countries. The producing countries hold a total of 1,000 votes, distributed so that each country receives five initial votes and an additional number corresponding to its percentage as laid down by the Agreement. The consuming countries hold a total of 1,000 votes also distributed so that each country receives five initial votes and an additional number proportionate to tonnages. The allocation of votes in each category is periodically reviewed.

The International Tin Agreement establishes floor and ceiling prices for tin and, by the medium of a buffer stock and remedial trading on the London Metal Exchange, aims at confining the price within these limits. The buffer stock was established with contributions from producing countries, equivalent to 10,000 long tons of metal, wholly made in cash at £stg1,000 per long ton; a further £10 million remains on call from the producer members and a standby-credit facility of £10 million from a consortium of banks. The original buffer stock price range under the Third Agreement was: ceiling £1,400—must sell; £1,300 to £1,400—may sell; £1,200 to £1,300—no action; £1,100 to £1,200—may buy; floor £1,100—must buy. However, following devaluation of sterling, the buffer stock price range was adjusted to the following limits: £1,630—must sell; £1,515 to £1,630—may sell; £1,400 to £1,515—no action; £1,280 to £1,400—may buy; £1,280—must buy.

On 18 September 1968 the International Tin Council declared the period 19 September 1968 to 31 December 1968 to be a period of export control. The total permissible export amount during that period for the six producing members in the agreement, Bolivia, Congo D.R., Indonesia,



Malaysia, Nigeria, and Thailand, was 42,950 long tons. The quotas established for the producer members represented a moderate cut, in effect some 4 per cent on exports in the second quarter of 1968. The Council also addressed an invitation to the Australian Government, asking that Australia limit its exports of tin to the same degree and for the same period as the producer members of the Agreement. The Australian Government introduced export controls on tin and tin concentrates as from 6 December 1968. Export restrictions on tin were lifted in early December 1969.

Australia has signed the Fourth International Tin Agreement, which was negotiated at Geneva in April/May 1970 and will come into operation as from 1 July 1971, for a period of five years. Legislation was introduced into Parliament on 1 April 1971 to ratify Australia's participation in the Agreement. Australia will be joining the Fourth Agreement as a 'producing' (i.e. exporting) member, whereas in past Agreements our status has been that of a 'consuming' (i.e. importing) member. This stems from the fact that Australia's tin production has increased significantly over recent years making it a net exporter of tin.

The objectives of this Agreement are the same as for its predecessors. Producing countries are required to contribute to a buffer stock—equivalent in cash or tin up to 20,000 tons of tin metal—which is used to buffer short-term fluctuations in the world market price. An initial contribution equivalent to 7,500 tons of tin metal will be subscribed on entry into force of the Agreement. In the event of persistent market disequilibrium through causes beyond the ability of the buffer stock mechanism to control, the Agreement also provides for the regulation of exports and stocks to stabilise the market. The main provisions of the Fourth Agreement are substantially the same as those of the current (Third) Agreement. However, the Buffer Stock Manager—a paid Council employee charged with operating the buffer stock—has been given somewhat greater flexibility in reacting to market situations.

#### **International Lead-Zinc Study Group**

With the cessation of stockpile buying of lead and zinc by the United States Government in 1958, world producers were faced with the prospect of a serious imbalance between world supply and demand for these metals. To meet this problem a series of meetings of interested governments was held, at which Australia was represented. These meetings culminated in the formation of the International Lead-Zinc Study Group which was established in January 1960. The Study Group comprises the following Governments: Algeria, Australia, Austria, Belgium, Bulgaria, Canada, Czechoslovakia, Denmark, Finland, France, the Federal Republic of Germany, Hungary, India, Italy, Japan, Mexico, Morocco, the Netherlands, Norway, Peru, Poland, the Republic of South Africa, Spain, Sweden, Tunisia, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, the United States of America, Yugoslavia, Zambia. The Group provides opportunities for inter-governmental consultations on international trade in lead and zinc and for studies of the world situation in lead and zinc having regard especially to the desirability of providing continuous accurate information regarding the supply and demand position and its probable development.

## **MINERAL INDUSTRY STATISTICS**

Statistics presented in this chapter refer mainly to the mining industry, mineral production, mineral exploration, and overseas participation in the Australian mining industry. In addition to the mining industry, data relating to mineral processing and treatment and overseas trade are included to give a more complete picture of the place of the mining industry and other associated activities in the Australian economy.

### **Mining industry statistics, 1968–69**

This section contains statistics of the mining industry for all States and Territories and Australia obtained from the Mining Census taken in respect of the year ended June 1969. This latest census differs from previous censuses for reasons given below, and therefore the statistics obtained from it are not strictly comparable with statistics of the mining industry which have been published for previous years. For this reason the two sets of data are presented separately, the 1968–69 data appearing first, and the run of years data following.

In 1968 and earlier years, the Annual Mining and Quarrying Census related to years ended 31 December. However, commencing with 1968–69, the Mining Census was changed to a year ended 30 June to conform with the period covered by other economic censuses in Australia.



For the year ended June 1969, the Mining Census (including quarrying) was conducted for the first time on an integrated basis with Censuses of Manufacturing, Electricity and Gas, Retail Trade and Selected Services, and Wholesale Trade.

Briefly, the integration of these economic censuses was designed to increase substantially the usefulness and comparability of economic statistics collected and published by the Bureau, and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates. A detailed description of the integrated censuses is contained in Chapter 31, Year Book No. 56.

The economic censuses of Mining, Manufacturing, and Retail Trade previously conducted in Australia were originally designed and subsequently developed primarily to provide statistics for particular industries on a basis which would best suit the requirements of users interested in statistics of those industries. More recently there has been a growth of interest in statistics describing activity in the economy as a whole—reflected, for example, in the development of employment and earnings statistics, surveys of capital expenditure and stocks and the whole field of national accounts statistics. For such purposes statistics derived from economic censuses in the past have had serious limitations despite the fact that they covered a broad area of the whole economy. Because of the special-purpose nature of each of the censuses, there were no common definitions of data, there was no common system of reporting units, and, as a standard industrial classification was not used for these censuses, industry boundaries were not defined in ways which would avoid overlapping or gaps occurring between the industrial sectors covered. For these reasons, direct aggregation and comparison of statistics from different censuses were not possible.

The integration of these economic censuses meant that for the first time they were being collected on the basis of a common framework of reporting units and data concepts and in accordance with a standard industrial classification. As a result, the statistics for the industries covered by the censuses are now provided with no overlapping or gaps in scope, and in such a way that aggregates for certain important economic data such as value added, employment, salaries and wages, fixed capital expenditure and stocks can be obtained on a consistent basis for all sectors of the economy covered by the censuses.

For the integration of the various censuses it was necessary to undertake three major developments:

- (a) The census units for which the statistics were to be collected (mines, factories, shops etc) had to be defined and identified in consistent ways and recorded in a central register, together with identifying data about the businesses owning and operating them.
- (b) A standard industrial classification had to be adopted so that the census units could be classified in consistent ways and to enable the boundaries of the economic censuses to be determined without gaps or overlapping between them.
- (c) In order to bring the items of data to a consistent basis of definition in all censuses, it was necessary to revise all the forms used in previous censuses.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment), in general, now covers all the operations carried on under the one ownership at a single physical location. The mining establishment is thus one predominantly engaged in mining, but the data supplied for it now cover (with a few exceptions) all activities at the location. Previously, the mining establishment covered only mining activities, including the dressing or beneficiation of ores or other minerals. It now covers, in addition, subject to certain exceptions mentioned below:

- (a) Any activities connected with the selling and distribution of the minerals produced and
- (b) Any non-mining activities (e.g. manufacturing, construction).

The exceptions in general relate to locations where the subsidiary activities (in terms of gross value) exceed one million dollars, which are treated for statistical purposes as two or more establishments corresponding to the various kinds of activity carried on.

The establishment statistics (other than the number of establishments) also include data relating to separately located administrative offices and ancillary units serving the establishment, and forming part of the business (enterprise) which owns and operates the establishment. These units, such as head offices, storage premises, etc., were formerly excluded from the mining census.

The application of the definition of standardised census units, as set out above, has resulted in the exclusion of a number of units covered by mining censuses in the past. Previous censuses covered, broadly, all mining carried out at locations held under mining leases, and quarrying activities, irrespective of whether mining or quarrying was the predominant activity at the location. However, from 1968-69, if mining (or quarrying) is not the predominant activity the establishment is not classified

to mining and is not covered by the mining census. For example, where mining at an establishment is subsidiary to an activity covered by one of the other integrated censuses, such as clay mining at a brick manufacturing establishment, data on the mining operations are included in the manufacturing census as part of the whole activities of that establishment.

In addition to those mining operations excluded by the application of the definition of the census unit, itinerant and part-time miners have now been omitted because of their limited scale of operations and consequent difficulties in collecting census returns for them. Previously, data in respect of this category of mining were estimated and included in the Mining Census results.

As a result of these changes, the 3,546 large and small mines and quarries for which data were collected, or estimated, in the 1968 census have been reduced to 1,716 mining establishments in the 1968-69 census. Itinerant and part-time miners in the metallic, construction materials, and other non-metallic sub-divisions account for a large proportion of this reduction. The rest of the reduction results from establishments at which the mining activity is subsidiary to some other activity at the same location being classified outside the mining division. This category mainly affects the other non-metallic (such as clay mining and limestone quarrying) and construction materials sub-divisions.

The Australian Standard Industrial Classification (ASIC), described in the publication *Australian Standard Industrial Classification (Preliminary Edition)*, 1969, Vol. 1, defines the industries in the economy for statistical purposes, thus permitting the scope of the different economic censuses to be specified without any gaps or overlapping between them. It also sets out standard rules for identifying the statistical units (e.g. establishments) and for coding them to the industries of the classification. This classification is broadly convertible to the International Standard Industrial Classification adopted by the United Nations Statistical Commission. The adoption of the ASIC has resulted in changes in scope between the 1968-69 economic censuses and the individual economic censuses conducted in previous years. However, in the case of the mining census, which covers the whole of the mining division of the ASIC except for mineral exploration and other services to mining, the main change from previous censuses is the inclusion of briquetting establishments and natural gas absorption or purifying plants.

The third step in integrating the censuses, whereby the items of data on the census forms were standardised for all census sectors, has meant changes in the content of the statistics. For example, the value of "turnover" is now collected instead of the value of output at the mine, and purchases and selected expenses are collected as well as the value of specified materials, fuels, etc., used. However, the underlying concept of 'value added' is similar to the former concept 'value of production', even though its method of derivation is different. Value added, the basic measure of the establishment's contribution to total production, is now calculated as turnover\* less purchases and transfers in (from other establishments of the enterprise), plus increase (or less decrease) in stocks. In the past the corresponding item, value of production, was obtained by deducting the value of materials, fuels, etc. used from the value of output at the mine. A detailed comparison of the method of derivation is shown under *Value added* on page 918.

Even though the concept of value added is similar to value of production, direct comparison of 1968-69 and 1968 figures will not be possible because of the change in census units already mentioned, which has resulted in the value added for the whole establishment's activities being reported (not merely the value added for the mining activity), and in the omission of value added by mining activities in establishments classified outside the mining division. Comparison is also affected, of course, by the changes in the scope of the mining census due to the adoption of ASIC, and by the rectification of certain deficiencies in coverage (and of data reported) in the censuses for earlier years. A further factor is that a different valuation, estimated on the basis of commercial prices, has been placed on minerals produced by enterprises for their own consumption in Australia.

As mentioned above, the value of 'turnover' (including the value of sales and transfers out) is now collected in the mining census in lieu of the value of output at the mine published for 1968 and earlier years. It should be noted, however, that statistics of the value of output at the mine of mineral production continue to be compiled for all establishments, including those classified outside the mining division. These values of output for 1968-69 are included in the section *Mineral production* on page 923.

The change in the census period from year ended 31 December to 30 June means that the 1968-69 census figures overlap the 1968 census results in regard to the period July to December 1968. However, it is not possible to distinguish the precise extent of this overlap due to the innovations in regard to census units and industrial classification mentioned above.

\* In this sub-section 'sales transfers out and other operating revenue' appears instead of 'turnover', as two components of turnover have been omitted from the preliminary statistics which are shown for 1968-69. These are 'capital work done for own use' and 'bounties and subsidies on production'.



The statistics in this sub-section are preliminary and subject to revision. While the industry classification of mining establishments, and the adjustment to a consistent basis of the value of transfers between establishments of the same enterprise, have been substantially completed, both are subject to final confirmation. For these reasons, only key items of data are presented for broad industry groups. The first table shows these key items for Australia. Each following table shows statistics for a particular item for all States and Territories and Australia, preceded by an explanation of the item.

### MINING ESTABLISHMENTS: SUMMARY OF OPERATIONS, BY INDUSTRY SUB-DIVISION AUSTRALIA 1968-69

Industry sub-division	ASIC code(a)	Number of establish- ments operating during 1968-69	Persons employed(b)				Sales, transfers out and other operating revenue	Stocks at 30 June		Purchases, transfers in and selected expenses	Value added
			Males	Females	Total	Salaries		1968	1969		
		No.	No.	No.	No.	\$m	\$m	\$m	\$m	\$m	\$m
Metallic minerals	11	343	25,923	1,261	27,184	116.8	640.8	58.4	71.8	223.4	430.8
Coal	12	152									
Crude petroleum including natural gas	13	9	19,068	274	19,342	92.8	333.0	27.6	29.4	130.6	204.3
Construction materials	14	870	6,560	428	6,988	24.5	121.0	9.4	10.1	46.2	75.6
Other non-metallic minerals	15	342	1,707	74	1,781	5.7	33.7	2.6	3.0	15.6	18.6
Total mining, excluding services to mining		1,716	53,258	2,037	55,295	239.8	1,128.6	98.1	114.3	415.7	729.2

(a) Australian Standard Industrial Classification; see page 914.

(b) At 30 June 1969; includes working proprietors.

### Number of establishments

The following table shows the number of establishments which operated during the year 1968-69. These relate to mining establishments as such and do not include the numbers of separately located administrative offices and ancillary units.

### MINING ESTABLISHMENTS: NUMBER OF ESTABLISHMENTS OPERATING DURING 1968-69, BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metallic minerals	11	82	10	111	6	78	41	15		343
Coal	12	99	6	40	1	3	3			152
Crude petroleum including natural gas	13									
Construction materials	14	326	206	146	97	51	31	6	7	870
Other non-metallic minerals	15	156	51	31	61	33	10			342
Total mining, excluding services to mining		663	276	332	166	166	85	21		1,716

(a) Australian Standard Industrial Classification; see page 914.

### Employment

The statistics of the number of persons employed shown in the following table relate to working proprietors at the end of June 1969 and employees on the payroll of the last pay period in June 1969, including those working at separately located administrative offices and ancillary units in the State. Note that persons employed in each State (and their wages and salaries) relate to those employed at establishments, administrative offices or ancillary units located in the State, even though the administrative offices or ancillary units may have served establishments located in another State.

**MINING ESTABLISHMENTS: MALES, FEMALES AND PERSONS EMPLOYED<sup>(a)</sup>  
BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES, 1968-69**

Industry sub-division	ASIC code <sup>(b)</sup>	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>MALES EMPLOYED</b>										
Metallic minerals . . .	11	6,841		6,223		7,596	3,527	961	..	25,923
Coal . . .	12	13,112		2,295			(c)	..	..	
Crude petroleum including natural gas . . .	13	..	2,802	(c)	877	676	..	..	..	19,068
Construction materials . .	14	2,250	1,865	1,026	652	467	162	52	86	6,560
Other non-metallic minerals	15	613	186	(c)	365	186	(c)	..	..	1,707
<b>Total mining, excluding services to mining .</b>		<b>22,816</b>	<b>4,853</b>	<b>9,861</b>	<b>1,894</b>	<b>8,925</b>	<b>3,810</b>	<b>1,013</b>	<b>86</b>	<b>53,258</b>
<b>FEMALES EMPLOYED</b>										
Metallic minerals . . .	11	234		424		350	121	34	..	1,261
Coal . . .	12	112		58			(c)	..	..	
Crude petroleum including natural gas . . .	13	..	114	(c)	74	12	..	..	..	274
Construction materials . .	14	124	161	53	25	51	3	1	10	428
Other non-metallic minerals	15	30	10	(c)	16	5	(c)	..	..	74
<b>Total mining, excluding services to mining .</b>		<b>500</b>	<b>285</b>	<b>544</b>	<b>115</b>	<b>418</b>	<b>130</b>	<b>35</b>	<b>10</b>	<b>2,037</b>
<b>PERSONS EMPLOYED</b>										
Metallic minerals . . .	11	7,075		6,647		7,946	3,648	995	..	27,184
Coal . . .	12	13,224		2,353			(c)	..	..	
Crude petroleum including natural gas . . .	13	..	2,916	(c)	951	688	..	..	..	19,342
Construction materials . .	14	2,374	2,026	1,079	677	518	165	53	96	6,988
Other non-metallic minerals	15	643	196	(c)	381	191	(c)	..	..	1,781
<b>Total mining, excluding services to mining .</b>		<b>23,316</b>	<b>5,138</b>	<b>10,405</b>	<b>2,009</b>	<b>9,343</b>	<b>3,940</b>	<b>1,048</b>	<b>96</b>	<b>55,295</b>

(a) At 30 June 1969; includes working proprietors. (b) Australian Standard Industrial Classification; see page 914.  
(c) Not available for publication.

### Accidents in mining

Particulars of numbers of persons killed and injured in accidents in mines and associated treatment plants are recorded by State Mines Departments. Numbers injured are not reported on a uniform basis in all States, as varying criteria are used in determining what constitutes injury. In 1968-69 (calendar year 1968 for Queensland), 35 persons were recorded as killed and 1,152 as injured in mining (including quarrying) accidents. Recorded deaths and injuries in that year in the metallic minerals industry were 30 and 751, and in the coal mining industry 2 and 275.

### Wages and salaries

The following table shows the wages and salaries of all employees of the establishment, including those working at separately located administrative offices and ancillary units in the State. Drawings of working proprietors are not included.

**MINING ESTABLISHMENTS: WAGES AND SALARIES, BY INDUSTRY  
SUB-DIVISION, STATES AND TERRITORIES, 1968-69**  
(\$ million)

Industry sub-division	ASIC code <sup>(a)</sup>	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metallic minerals . . .	11	32.2		31.8		28.3	15.4	5.2	..	116.8
Coal . . .	12	64.2		12.0			(b)	..	..	
Crude petroleum including natural gas . . .	13	..	13.7	(b)	3.9	2.8	..	..	..	92.8
Construction materials . .	14	8.4	7.5	3.2	2.0	2.2	0.5	0.3	0.4	24.5
Other non-metallic minerals	15	1.8	0.6	(b)	1.3	0.7	(b)	..	..	5.7
<b>Total mining, excluding services to mining .</b>		<b>106.6</b>	<b>21.9</b>	<b>48.2</b>	<b>7.1</b>	<b>34.0</b>	<b>16.3</b>	<b>5.4</b>	<b>0.4</b>	<b>239.8</b>

(a) Australian Standard Industrial Classification; see page 914. (b) Not available for publication.



**Sales, transfers out and other operating revenue**

The following table shows sales of minerals and other goods whether produced by the establishment or not, plus transfers out of minerals and other goods to other establishments of the same enterprise, plus all other operating revenue from outside the enterprise, such as commission, repair and service revenue. This excludes rents, leasing revenue, interest, royalties, and receipts from the sale of fixed tangible assets.

**MINING ESTABLISHMENTS: SALES, TRANSFERS OUT AND OTHER OPERATING  
REVENUE, BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES, 1968-69**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metallic minerals	11	130.6	39.8	151.8	57.8	217.0	55.6	33.6	..	640.8
Coal	12	187.0		54.0		38.5	(b)	..	..	333.0
Crude petroleum including natural gas	13	..	40.1	(b)	9.8		..	..	..	
Construction materials	14	40.4		13.3	9.8	11.7	2.3	1.8	1.7	121.0
Other non-metallic minerals	15	9.4	3.8	(b)	12.2	3.6	(b)	..	..	33.7
Total mining, excluding services to mining		367.4	83.6	231.0	79.8	270.8	59.1	35.3	1.7	1,128.6

(a) Australian Standard Industrial Classification; see page 914.

(b) Not available for publication.

**Purchases, transfers in and selected expenses**

The following table shows purchases of electricity, fuels, stores and other materials, plus transfers in of goods from other establishments of the same enterprise, plus charges for processing and other commission work and payments to mining contractors, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses and sales commission payments.

**MINING ESTABLISHMENTS: PURCHASES, TRANSFERS IN AND SELECTED EXPENSES  
BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES, 1968-69**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metallic minerals	11	46.8	14.6	48.9	17.2	81.1	18.4	14.1	..	223.4
Coal	12	82.5		23.5		4.5	(b)	..	..	130.6
Crude petroleum including natural gas	13	..	16.7	(b)	3.1		..	..	..	
Construction materials	14	14.4		5.5	3.1	4.0	1.0	0.9	0.7	46.2
Other non-metallic minerals	15	4.0	1.5	(b)	5.9	2.4	(b)	..	..	15.6
Total mining, excluding services to mining		147.6	32.7	81.6	26.3	92.0	19.8	14.9	0.7	415.7

(a) Australian Standard Industrial Classification; see page 914.

(b) Not available for publication.

**Stocks**

Statistics on the value of stocks at 30 June 1968 and 1969, are shown in the following table. Figures include all the stocks of materials, fuels, etc., and mine products and work-in-progress of the establishment whether located at the establishment or elsewhere.

**MINING ESTABLISHMENTS: STOCKS AT 30 JUNE 1968 AND 1969**  
**BY INDUSTRY SUB-DIVISION, STATES AND TERRITORIES**  
(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
<b>STOCKS AT 30 JUNE 1968</b>										
Metallic minerals	11	21.0		8.4		16.9	7.2	4.3		58.4
Coal	12	9.4	8.8	5.5	0.9	3.3	(b)			27.6
Crude petroleum including natural gas	13			(b)						
Construction materials	14	3.2	3.1	1.0	1.0	0.7	0.2	0.1	0.1	9.4
Other non-metallic minerals	15	0.3	0.4	(b)	1.2	0.2	(b)			2.6
<b>Total mining, excluding services to mining</b>		<b>34.0</b>	<b>12.4</b>	<b>15.6</b>	<b>3.1</b>	<b>21.1</b>	<b>7.4</b>	<b>4.4</b>	<b>0.1</b>	<b>98.1</b>
<b>STOCKS AT 30 JUNE 1969</b>										
Metallic minerals	11	21.6		11.3		24.1	8.3	5.4		71.8
Coal	12	11.8	7.0	5.7	1.7	4.3	(b)			29.4
Crude petroleum including natural gas	13			(b)						
Construction materials	14	3.8	2.2	1.1	0.8	1.7	0.3	(c)	0.1	10.1
Other non-metallic minerals	15	0.5	0.5	(b)	1.2	0.3	(b)			3.0
<b>Total mining, excluding services to mining</b>		<b>37.6</b>	<b>9.8</b>	<b>19.0</b>	<b>3.6</b>	<b>30.6</b>	<b>8.6</b>	<b>5.1</b>	<b>0.1</b>	<b>114.3</b>

(a) Australian Standard Industrial Classification; see page 914.  
\$50,000.

(b) Not available for publication. (c) Less than

### Value added

The following table shows *value added*, calculated as sales, transfers out and other operating revenue, plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses. Preceding the table is a comparison of the method of derivation used, with the corresponding former concept *value of production*.

<i>Value of production 1968</i>	<i>Value added 1968-69</i>
Selling value at the mine, exclusive of transport costs from the mine to the point of sale, of minerals produced	Sales, and transfers out (to other establishments of the enterprise), of minerals and other goods produced by the establishment, <i>plus</i> Sales and transfers out of minerals and other goods not produced by the establishment, <i>plus</i> Bounties and subsidies on production (a), <i>plus</i> All other operating income, <i>plus</i> Capital work done for own use, for rental or lease(a)
<i>Equals</i> Value of output	<i>Equals</i> value of turnover
	<i>Plus</i> Value of stocks at 30 June 1969
	<i>Less</i> Value of stocks at 30 June 1968
<i>Less</i> Value of power, fuel, light, other materials and stores used in production(b)	<i>Less</i> the sum of Purchases, and transfers in (from other establishments of the enterprise), of electricity, fuels, stores and other materials for use in production Purchases and transfers in of minerals and other goods for resale Charges for commission and contract work Repair and maintenance expenses Outward freight and cartage, motor vehicle running expenses, sales commission payments
<i>Equals</i> Value of production	<i>Equals</i> Value added

(a) Omitted from the following table.  
not available.

(b) Not deducted for construction materials in N.S.W. where the data were

**MINING ESTABLISHMENTS: VALUE ADDED, BY INDUSTRY SUB-DIVISION  
STATES AND TERRITORIES, 1968-69**

(\$ million)

Industry sub-division	ASIC code(a)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metallic minerals	11	84.4		105.9		143.1	38.3	20.3		430.8
Coal	12	106.9		30.7						
Crude petroleum including natural gas	13		23.5		41.3	35.0	(b)			204.3
Construction materials	14	26.5	22.5	8.0	6.5	8.8	1.4	0.9	1.0	75.6
Other non-metallic minerals	15	5.5	2.3	(b)	6.2	1.3	(b)			18.6
<b>Total mining, excluding services to mining</b>		<b>223.4</b>	<b>48.3</b>	<b>152.8</b>	<b>54.1</b>	<b>188.2</b>	<b>40.4</b>	<b>21.1</b>	<b>1.0</b>	<b>729.2</b>

(a) Australian Standard Industrial Classification; see page 914.

(b) Not available for publication.

### Mining industry statistics, 1964 to 1968

Mining industry data for years up to 1968 were obtained from the former annual Mining and Quarrying Census. As explained on pages 912-5, the statistics obtained from the Mining Census taken in respect of the year ended June 1969 are not strictly comparable with these statistics obtained from previous censuses. The statistics in this sub-section are final. Further details of mining industry statistics up to 1968 are contained in pages 920-7 of Year Book No. 56.

#### Number of mines and quarries

The following table shows the number of mines and quarries which operated in Australia for the years 1964 to 1968.

#### NUMBER OF MINES AND QUARRIES: AUSTRALIA, 1964 TO 1968

Industry	1964	1965	1966	1967	1968
<b>Metal mining—</b>					
Gold	246	193	179	171	160
Silver-lead-zinc	20	32	30	32	30
Copper-gold	86	75	124	174	214
Tin	371	391	363	393	341
Mineral sands	20	21	23	25	23
Iron	(a)	(a)	11	11	12
Other metal	56	53	52	69	59
<b>Total, metal mining</b>	<b>799</b>	<b>765</b>	<b>782</b>	<b>875</b>	<b>839</b>
<b>Fuel mining—</b>					
Black coal	179	168	158	150	150
Brown coal	7	6	5	5	5
Other fuel	3	3	4	5	5
<b>Total, fuel mining</b>	<b>189</b>	<b>177</b>	<b>167</b>	<b>160</b>	<b>160</b>
<b>Non-metal (excluding fuel) mining(b)</b>	<b>756</b>	<b>802</b>	<b>973</b>	<b>1,098</b>	<b>1,152</b>
<b>Total, all mining</b>	<b>1,744</b>	<b>1,744</b>	<b>1,922</b>	<b>2,133</b>	<b>2,151</b>
<b>Construction material quarrying(b)</b>	<b>1,148</b>	<b>1,234</b>	<b>1,276</b>	<b>1,280</b>	<b>1,395</b>
<b>Total, all mining and quarrying</b>	<b>2,892</b>	<b>2,978</b>	<b>3,198</b>	<b>3,413</b>	<b>3,546</b>

(a) Included in Other metal. (b) Incomplete, owing to difficulties of coverage.

#### Employment in mining and quarrying

The following table shows the average numbers engaged in the various mining industries in Australia for the years 1964 to 1968. The figures show the average number of persons employed during the whole year, including working proprietors.

## MINING AND QUARRYING: EMPLOYMENT(a), AUSTRALIA, 1964 TO 1968

Industry	1964	1965	1966	1967	1968
Metal mining—					
Gold . . . . .	4,753	4,525	4,447	4,074	3,602
Silver-lead-zinc . . . . .	7,811	7,269	8,681	9,703	9,490
Copper-gold . . . . .	2,341	2,312	2,554	2,712	3,016
Tin . . . . .	1,191	1,402	1,550	1,748	1,544
Mineral sands . . . . .	1,734	2,000	2,434	2,543	2,694
Iron . . . . .	(b)	(b)	1,323	1,609	1,999
Other metal . . . . .	1,348	2,251	972	1,299	1,670
<i>Total, metal mining</i> . . . . .	<i>19,178</i>	<i>19,759</i>	<i>21,961</i>	<i>23,688</i>	<i>24,015</i>
Fuel mining—					
Black coal(c) . . . . .	15,364	15,391	15,169	15,448	16,308
Brown coal. . . . .	1,673	1,710	1,760	1,677	1,487
<i>Total, fuel mining</i> . . . . .	<i>17,037</i>	<i>17,101</i>	<i>16,929</i>	<i>17,125</i>	<i>17,795</i>
Non-metal (excluding fuel) mining(d) . . . . .	2,783	2,795	2,930	2,803	3,433
<i>Total, all mining</i> . . . . .	<i>38,998</i>	<i>39,655</i>	<i>41,820</i>	<i>43,616</i>	<i>45,243</i>
Construction material quarrying(d) . . . . .	5,814	6,217	5,957	5,848	6,527
<i>Total, all mining and quarrying</i> . . . . .	<i>44,812</i>	<i>45,872</i>	<i>47,777</i>	<i>49,464</i>	<i>51,770</i>

(a) Average employment during whole year including working proprietors. (b) Included in Other metal. (c) Includes Other fuel mining. (d) Incomplete, owing to difficulties of coverage.

## Salaries and wages paid

Salaries and wages paid in the mining and quarrying industries in Australia during each year 1964 to 1968 are shown in the following table. Information regarding rates of wages paid in the mining industry is shown in Chapter 12 Labour, Wages and Prices (page 245) and also in the *Labour Report*.

MINING AND QUARRYING: SALARIES AND WAGES PAID(a), AUSTRALIA  
1964 TO 1968  
(\$'000)

Industry	1964	1965	1966	1967	1968
Metal mining—					
Gold . . . . .	11,812	11,974	12,409	12,591	11,465
Silver-lead-zinc . . . . .	29,948	34,397	44,651	46,711	49,225
Copper-gold . . . . .	6,834	7,415	8,205	9,235	10,780
Tin . . . . .	2,648	3,313	4,156	5,035	5,056
Mineral sands . . . . .	4,706	5,837	7,673	8,603	10,015
Iron . . . . .	(b)	(b)	4,917	7,529	9,631
Other metal . . . . .	4,038	7,241	3,683	5,790	7,372
<i>Total, metal mining</i> . . . . .	<i>59,986</i>	<i>70,177</i>	<i>85,696</i>	<i>95,495</i>	<i>103,544</i>
Fuel mining—					
Black coal(c) . . . . .	52,204	55,942	60,191	65,549	75,607
Brown coal. . . . .	5,144	5,503	5,672	5,662	5,729
<i>Total, fuel mining</i> . . . . .	<i>57,348</i>	<i>61,445</i>	<i>65,863</i>	<i>71,210</i>	<i>81,335</i>
Non-metal (excluding fuel) mining(d) . . . . .	6,248	6,388	6,821	5,570	6,753
<i>Total, all mining</i> . . . . .	<i>123,582</i>	<i>138,010</i>	<i>158,380</i>	<i>172,275</i>	<i>191,632</i>
Construction material quarrying(d) . . . . .	9,364	10,751	11,256	11,136	11,290
<i>Total, all mining and quarrying</i> . . . . .	<i>132,946</i>	<i>148,761</i>	<i>169,636</i>	<i>183,411</i>	<i>202,922</i>

(a) Excludes mines and quarries employing less than four persons, and drawings by working proprietors; the amounts are net after deducting value of explosives sold to employees. (b) Included in Other metal. (c) Includes Other fuel mining. (d) Incomplete, owing to difficulties of coverage.



Power, fuel, light, and materials, etc. used.

**MINING AND QUARRYING: VALUE OF POWER, FUEL, LIGHT, AND  
OTHER MATERIALS AND STORES USED, AUSTRALIA, 1964 TO 1968**  
(\$'000)

Industry	1964	1965	1966	1967	1968
<b>Metal mining—</b>					
Gold . . . . .	8,334	8,433	8,207	8,147	7,397
Silver-lead-zinc . . . . .	22,688	21,009	22,265	24,923	26,479
Copper-gold . . . . .	7,698	8,365	10,537	12,544	14,501
Tin . . . . .	1,854	2,115	3,095	3,676	4,336
Mineral sands . . . . .	5,496	6,138	7,569	7,820	9,761
Iron . . . . .	(a)	(a)	3,923	11,564	16,047
Other metal . . . . .	3,162	4,366	2,285	3,656	4,914
<i>Total, metal mining . . . . .</i>	<i>49,234</i>	<i>50,427</i>	<i>57,883</i>	<i>72,329</i>	<i>83,434</i>
<b>Fuel mining—</b>					
Black coal(b) . . . . .	29,114	31,718	35,746	41,069	49,125
Brown coal . . . . .	1,532	2,108	2,082	1,968	1,987
<i>Total, fuel mining . . . . .</i>	<i>30,648</i>	<i>33,827</i>	<i>37,828</i>	<i>43,036</i>	<i>51,112</i>
<b>Non-metal (excluding fuel) mining(c) . . . . .</b>	<b>5,342</b>	<b>5,720</b>	<b>5,641</b>	<b>5,209</b>	<b>6,189</b>
<i>Total, all mining . . . . .</i>	<i>85,226</i>	<i>89,974</i>	<i>101,351</i>	<i>120,574</i>	<i>140,735</i>
<b>Construction material quarrying(c) . . . . .</b>	<b>9,728</b>	<b>11,067</b>	<b>12,072</b>	<b>13,115</b>	<b>14,106</b>
<i>Total, all mining and quarrying . . . . .</i>	<i>94,952</i>	<i>101,041</i>	<i>113,423</i>	<i>133,689</i>	<i>154,841</i>

(a) Included in Other metal. (b) Includes Other fuel mining. (c) Incomplete, owing to difficulties of coverage.

Value of additions and replacements to fixed assets in mining and quarrying

**MINING AND QUARRYING: VALUE OF ADDITIONS AND REPLACEMENTS TO  
FIXED ASSETS(a), AUSTRALIA, 1964 TO 1968**  
(\$'000)

Industry	1964	1965	1966	1967	1968
<b>Metal mining—</b>					
Gold . . . . .	1,365	1,094	1,195	1,558	2,516
Silver-lead-zinc . . . . .	20,071	10,939	12,535	14,595	8,350
Copper-gold . . . . .	7,419	5,333	6,085	5,813	7,234
Tin . . . . .	4,459	6,583	9,798	10,361	3,651
Mineral sands . . . . .	3,592	6,729	11,103	9,674	11,470
Iron . . . . .	(b)	(b)	36,436	20,112	18,829
Other metal . . . . .	5,556	32,228	13,051	12,827	14,373
<i>Total, metal mining . . . . .</i>	<i>42,462</i>	<i>62,906</i>	<i>90,203</i>	<i>74,939</i>	<i>66,423</i>
<b>Fuel mining—</b>					
Black coal(c) . . . . .	19,952	28,695	45,442	71,506	109,281
Brown coal . . . . .	5,416	6,115	5,107	5,277	7,668
<i>Total, fuel mining . . . . .</i>	<i>25,368</i>	<i>34,810</i>	<i>50,548</i>	<i>76,783</i>	<i>116,949</i>
<b>Non-metal (excluding fuel) mining(d) . . . . .</b>	<b>3,497</b>	<b>2,109</b>	<b>3,638</b>	<b>8,302</b>	<b>9,927</b>
<i>Total, all mining . . . . .</i>	<i>71,327</i>	<i>99,825</i>	<i>144,387</i>	<i>160,024</i>	<i>193,299</i>
<b>Construction material quarrying(d) . . . . .</b>	<b>5,867</b>	<b>7,303</b>	<b>5,273</b>	<b>7,640</b>	<b>6,744</b>
<i>Total, all mining and quarrying . . . . .</i>	<i>77,194</i>	<i>107,128</i>	<i>149,661</i>	<i>167,664</i>	<i>200,043</i>

(a) Excludes mines and quarries employing less than four persons. (b) Included in Other metal. (c) Includes Other fuel mining. (d) Incomplete, owing to difficulties of coverage.

## Value of output and production

The following tables show particulars of value of output on an ex-mine basis (local value of production) and value of production (net value of production) for the years 1964 to 1968. *These statistics are on an industry basis and not by product.* Reference to the value of production of mining and quarrying up to 1968 and other industries together with a brief explanation of terms used will be found in Chapter 30 Miscellaneous.

*Local value of mining and quarrying production.* The following table shows particulars of the local value of production of mining and quarrying for 1964 to 1968.

**MINING AND QUARRYING: LOCAL VALUE OF PRODUCTION(a), AUSTRALIA, 1964 TO 1968**  
(\$'000)

Industry	1964	1965	1966	1967	1968
<b>Metal mining—</b>					
Gold . . . . .	27,406	26,010	26,551	24,688	25,831
Silver-lead-zinc . . . . .	149,328	156,425	160,079	138,951	173,337
Copper-gold . . . . .	18,290	19,310	37,320	36,883	39,232
Tin . . . . .	10,078	12,340	14,566	15,388	17,317
Mineral sands . . . . .	18,538	25,983	31,216	37,251	38,379
Iron . . . . .	20,614	25,401	41,755	83,018	131,518
Other metal . . . . .			17,531	36,625	43,571
<b>Total, metal mining</b>	<b>244,254</b>	<b>265,470</b>	<b>329,018</b>	<b>372,803</b>	<b>469,185</b>
<b>Fuel mining—</b>					
Black coal . . . . .	128,040	143,704	151,383	160,099	188,786
Brown coal . . . . .	17,304	18,435	20,064	20,686	21,555
Other fuel . . . . .	2,164	5,345	9,230	21,286	39,308
<b>Total, fuel mining</b>	<b>147,508</b>	<b>167,484</b>	<b>180,676</b>	<b>202,071</b>	<b>249,649</b>
<b>Non-metal (excluding fuel) mining—</b>					
Clays(b) . . . . .	7,196	7,222	7,603	7,869	8,835
Gypsum . . . . .	2,014	2,014	2,005	2,126	2,165
Limestone . . . . .	9,236	9,711	10,601	12,047	12,382
Salt . . . . .	2,124	2,556	2,627	2,769	3,600
Other non-metal(b) . . . . .	7,234	7,808	9,276	7,129	9,946
<b>Total, non-metal mining</b>	<b>27,802</b>	<b>29,311</b>	<b>32,113</b>	<b>31,940</b>	<b>36,928</b>
<b>Total, all mining</b>	<b>419,562</b>	<b>462,266</b>	<b>541,807</b>	<b>606,814</b>	<b>755,762</b>
<b>Construction material quarrying(b)</b>	<b>73,236</b>	<b>80,104</b>	<b>83,344</b>	<b>91,822</b>	<b>96,735</b>
<b>Total, all mining and quarrying</b>	<b>492,800</b>	<b>542,370</b>	<b>625,152</b>	<b>698,636</b>	<b>852,497</b>

(a) Value of output or selling value at the mine or quarry.

(b) Incomplete, owing to difficulties of coverage.

**Net value of mining and quarrying production**

The following table shows particulars of the net value of production of mining and quarrying for 1964 to 1968.

**MINING AND QUARRYING: NET VALUE OF PRODUCTION(a), AUSTRALIA, 1964 TO 1968**  
(\$'000)

Industry	1964	1965	1966	1967	1968
<b>Metal mining—</b>					
Gold	19,074	17,577	18,344	16,541	18,434
Silver-lead-zinc	126,640	135,416	137,814	114,028	146,858
Copper-gold	10,592	10,946	26,783	24,340	24,731
Tin	8,632	10,225	11,471	11,711	12,982
Mineral sands	13,042	19,845	23,647	29,431	29,443
Iron			37,832	71,454	115,471
Other metal	17,040	21,036	15,245	32,969	38,658
<b>Total, metal mining</b>	<b>195,018</b>	<b>215,043</b>	<b>271,136</b>	<b>300,474</b>	<b>386,577</b>
<b>Fuel mining—</b>					
Black coal(b)	101,088	117,331	124,866	140,317	178,969
Brown coal	15,772	16,327	17,983	18,718	19,568
<b>Total, fuel mining</b>	<b>116,860</b>	<b>133,658</b>	<b>142,849</b>	<b>159,035</b>	<b>198,537</b>
<b>Non-metal (excluding fuel) mining—</b>					
Clays(c)	6,288	6,490	6,920	7,046	7,907
Gypsum	1,725	1,743	1,704	1,878	1,889
Limestone	6,792	6,919	7,666	8,879	8,863
Salt	1,847	2,245	2,227	2,235	2,717
Other non-metal(c)	5,806	6,194	7,954	6,693	9,358
<b>Total, non-metal mining</b>	<b>22,460</b>	<b>23,591</b>	<b>26,472</b>	<b>26,730</b>	<b>30,735</b>
<b>Total, all mining</b>	<b>334,338</b>	<b>372,292</b>	<b>440,456</b>	<b>486,240</b>	<b>615,848</b>
<b>Construction material quarrying(c)</b>	<b>63,508</b>	<b>69,037</b>	<b>71,272</b>	<b>78,708</b>	<b>82,629</b>
<b>Total, all mining and quarrying</b>	<b>397,846</b>	<b>441,330</b>	<b>511,728</b>	<b>564,947</b>	<b>698,477</b>

(a) Local value (i.e. value of output at mine or quarry) less cost of power, fuel, light and other materials and stores used; depreciation and maintenance costs have not been deducted. (b) Includes other fuel mining. (c) Incomplete owing to difficulties of coverage.

## Mineral production

This section contains details of the output (quantities and values) of minerals during the year ended June 1969 for all States and Territories and Australia, together with information for Australia for the four preceding years. Figures for 1968–69 are preliminary and subject to revision.

It should be noted that details for the four preceding years relate to a year ended December. The change in 1969 to a June year was made to bring the mineral production collection and the mining census (which in previous years also related to a December year) to the same time basis as the other economic censuses conducted during that year.

Minerals are classified into five major groups, namely metallic minerals, coal, crude petroleum (including natural gas), construction materials and other non-metallic minerals. In the statistics published in this section the minerals are arranged in these five groups.

The statistics are derived from information supplied in returns to the various State Mines Departments and this Bureau, supplemented in some cases by information made available by the Department of National Development and by data compiled by this Bureau from other sources.

### Scope of mineral statistics

The statistics of mineral production for the year ended June 1969, apart from the change to a June year basis, are comparable with those for earlier years. Although the integration of the mining census for 1968–69 with other economic censuses conducted in that year (manufacturing, electricity and gas, retail trade, and wholesale trade) was accompanied by major changes in the scope of the

mining census and thus in the scope of the mining industry statistics, these changes had little effect on the scope of the mineral production statistics now published. This is because mineral production data were collected, not only from establishments coming within the scope of the mining census as now defined, but also from those establishments classified as non-mining establishments which, as a subsidiary activity, carried out mining or quarrying activities (e.g. brick and cement manufacturing establishments extracting clays, limestone), and from itinerant and part-time miners. The table *Value of minerals produced: Mining establishments and other producers* on page 932, in addition to giving details of total production during 1968-69 also gives details of the production attributable to establishments coming within the scope of the mining census and thus to the mining industry as now defined.

It should be noted, however, that, as in past years, coverage is deficient in the case of some minerals, principally because of the difficulties in obtaining complete lists of producers and collecting satisfactory returns.

### Principles for measuring output of minerals

The quantities of individual minerals produced are recorded, in general, in the form in which the minerals are dispatched from the mine or from associated treatment works in the locality of the mine. Thus for metallic minerals, the output is recorded as ore if no treatment is undertaken at or near the mine, and as concentrate if ore dressing operations are carried out in associated works in the locality of the mine. In addition to the basic quantity data, the content of metallic minerals (based on assay) are recorded. No allowance has been made for losses in smelting and refining and the quantities shown are therefore in general, greater than the contents actually recoverable.

The output of individual minerals is valued at the mine or at associated treatment works in the locality of the mine. This valuation is derived, in general, by valuing the quantity produced during the year at the unit selling value (including any subsidy) less any transport costs from the mine or associated treatment works to the point of sale. For some metals, however, special values of output, based on actual or estimated realisations are supplied by certain large mineral producers.

It should be noted that, commencing with the year 1968-69, the output of metals by enterprises for their own consumption in Australia has been valued on a different basis to that used in previous years. The effect of these changes was that the overall value of coal produced in 1968-69 was somewhat lower and the value of certain other minerals somewhat higher than if the earlier valuation methods had been retained.

### Quantity of minerals produced

The following tables show particulars of the quantity of minerals produced during 1968-69 and earlier years.

#### QUANTITY OF MINERALS PRODUCED: STATES AND TERRITORIES, 1968-69

Mineral		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
METALLIC MINERALS										
Antimony concentrate .	tons	261	..	..	..	..	..	..	..	261
Bauxite .	'000 tons	11	4	4,127	..	2,075	..	..	..	6,217
Beryllium ore .	tons	4	..	..	..	10	..	..	..	14
Bismuth concentrate .	"	..	..	37	..	..	..	1,491	..	1,528
Chromite .	"	..	..	..	..	..	..	..	..	..
Copper concentrate(a) .	"	44,295	..	354,621	22	3,353	60,523	30,223	..	493,037
Copper ore(b) .	"	(c)4,367	865	28,520	(d)	(d)	6,896	1,152	..	46,095
Gold—										
Bullion .	oz	395	11,139	52,302	2	668,618	160	89,932	..	822,548
Ore .	tons	6	..	..	..	..	..	..	..	6
Iron ore .	'000 tons	..	..	..	6,328	23,345	(e)1,446	908	..	32,027
Iron oxide(f) .	tons	15,121	559	17,898	..	..	12,562	..	..	46,140
Lead concentrate .	"	332,046	..	289,837	..	1,202	13,737	1,895	..	638,717
Lead-copper concen- trate .	"	..	..	..	..	..	12,827	..	..	12,827
Lead ore(g) .	"	9,201	..	42,809	400	..	..	..	..	52,410
Lead-zinc middlings .	"	3,246	..	..	..	..	..	..	..	3,246
Manganese ore .	"	..	..	..	45	163,169	..	670,604	..	833,818
Mineral sands—										
Ilmenite concentrate .	"	11,607	..	6,553	..	638,533	..	..	..	656,693
Leucoxene concen- trate .	"	..	..	..	..	8,730	..	..	..	8,730
Monazite concentrate .	"	726	..	488	..	3,014	..	..	..	4,228
Rutile concentrate .	"	206,310	..	102,390	..	1,260	1,702	..	..	311,662
Xenotime concentrate .	"	..	..	..	..	38	..	..	..	38
Zircon concentrate .	"	(h)207,167	..	(h)80,555	..	51,785	2,213	..	..	341,720

For footnotes, see end of table.



## QUANTITY OF MINERALS PRODUCED: STATES AND TERRITORIES, 1968-69—continued

Mineral		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
METALLIC MINERALS—continued										
Molybdenite concentrate	..	..	..	47	..	..	..	..	..	47
Nickel concentrate	..	..	..	..	..	51,140	..	..	..	51,140
Pyrite concentrate	..	..	..	..	79,413	17,153	36,238	..	..	132,804
Tantalite-columbite concentrate	lb	..	..	..	..	202,868	..	..	..	202,868
Tin concentrate(j)	tons	2,463	61	1,632	..	899	8,694	63	..	13,812
Tungsten concentrates—	..	..	..	..	..	..	..	..	..	..
Scheelite concentrate	..	..	..	3	..	..	1,560	..	..	1,563
Wolfram concentrate	..	1	..	164	..	..	523	46	..	734
Zinc concentrate	..	546,657	..	150,644	..	..	85,569	3,072	..	785,942
Zinc ore	..	..	..	..	11,200	..	..	..	..	11,200
COAL										
Black coal—	'000 tons	31,887	13	7,395	2,143	1,103	109	..	..	42,650
Semi-anthracite	..	..	..	20	..	..	2	..	..	22
Bituminous	..	31,887	13	7,000	..	..	108	..	..	39,008
Sub-bituminous	..	..	..	375	2,143	1,103	..	..	..	3,621
Brown coal (lignite)(j)	..	..	23,128	..	..	..	..	..	..	23,128
Brown coal briquettes	..	..	1,471	..	..	..	..	..	..	1,471
CRUDE PETROLEUM (INCLUDING NATURAL GAS)										
Crude oil	'000 bls	..	..	2,415	..	11,649	..	..	..	14,064
Natural gas	mil. cu ft	..	(k)725	2,005	..	144	..	..	..	2,874
Natural gas condensate	bls	..	..	2,333	..	..	..	..	..	2,333
CONSTRUCTION MATERIALS										
Sand	'000 tons	6,772	4,757	1,848	2,553	n.a.	290	483	530	{(l)16,711 (l)10,343 286
Gravel	..	3,439	2,301	2,094	522	n.a.	1,465			
Dimension stone	..	34	9	(d)	53	n.a.	1			
Crushed and broken stone	..	9,595	12,952	2,988	10,687	4,614	1,437	169	496	{42,925 23,376
Other (decomposed rock, etc.)	..	21,278	1,600	(d)	..	..	186			
OTHER NON-METALLIC MINERALS										
Asbestos	short tons	821	..	..	..	..	..	..	..	821
Barite	..	5,663	..	..	38,832	1,084	..	..	..	45,579
Clays—	..	..	..	..	..	..	..	..	..	..
Brick and shale	'000	3,355	1,673	375	481	1,031	162	..	..	7,077
Other(m)	..	500	216	229	119	162	49	..	..	1,275
Diatomite	..	2,183	..	460	..	..	..	..	..	2,643
Dolomite	..	7,766	..	8,965	286,705	..	2,208	..	..	305,644
Felspar (including cornish stone)	..	2,087	..	..	3,076	579	..	..	..	5,742
Garnet concentrate	..	40	..	282	..	..	..	..	..	322
Gypsum	..	28,075	80,355	..	678,276	107,854	..	..	..	894,560
Limestone (including shell and coral)	'000 tons	2,730	(d)	1,320	1,679	(d)	522	..	..	9,078
Lithium ores	..	..	..	..	..	817	..	..	..	817
Lithia (Li <sub>2</sub> O <sub>2</sub> ) content	units(n)	..	..	..	..	3,443	..	..	..	3,443
Magnesite, crude	tons	23,343	..	..	..	..	..	..	..	23,343
Mineral pigments—red ochre	..	..	..	..	..	588	66	..	..	654
Peat(o)	..	549	..	..	..	1,120	144	..	..	1,813
Pebbles—for grinding	..	..	..	..	78	..	1,022	..	..	1,100
Perlite	..	..	..	795	..	..	..	..	..	795
Phosphate rock	..	..	..	..	10,557	..	..	..	..	10,557
Pyrophyllite	..	1,933	..	..	..	..	..	..	..	1,933
Salt	'000	..	(d)	119	586	(d)	..	..	..	1,001
Silica	..	316,466	..	198,754	60,815	24,172	18,220	..	..	618,427
Sillimanite	..	1,484	..	..	424	..	..	..	..	1,908
Talc (including steatite and chlorite)	..	2,449	..	..	9,898	29,159	..	..	..	41,506

(a) Includes copper precipitate. (b) Includes cupreous ore for fertiliser. (c) Includes copper slag. (d) Not available for publication. (e) Iron concentrate. (f) For cement manufacture, coal washing, flux and gas purification. (g) Includes silver-lead ore, silver-lead slimes and lead slag. (h) Excludes mixed concentrate shipped interstate for final separation. (i) Includes tin-copper concentrate. (j) Includes brown coal used for briquette production. (k) Source: Department of National Development. (l) Incomplete, see individual States. (m) Incomplete, owing to difficulties of coverage. (n) 1 unit = 22.4 lb. (o) Comprises peat for fertiliser and peat moss.

NOTE. Particulars of the production of uranium concentrate are not available for publication.

## QUANTITY OF MINERALS PRODUCED: AUSTRALIA, 1965 TO 1968-69

Mineral		1965	1966	1967	1968	1968-69(a)
METALLIC MINERALS						
Antimony concentrate . . . . .	tons	55	150	154	244	261
Bauxite . . . . .	'000 tons	1,168	1,798	4,176	4,877	6,217
Beryllium ore . . . . .	tons	38	52	55	15	14
Bismuth concentrate . . . . .	"	..	1	106	1,553	1,528
Chromite . . . . .	"	23	..	138	86	..
Copper concentrate(b) . . . . .	"	389,697	478,710	392,679	452,100	493,037
Copper ore(c) . . . . .	"	1,193	1,123	2,223	1,430	46,095
Gold—						
Bullion . . . . .	oz	1,118,503	1,078,587	997,793	908,286	822,548
Ore . . . . .	tons	..	..	6	6	6
Iron ore . . . . .	'000 tons	6,695	10,893	17,036	(d)26,204	(d)32,027
Iron oxide(e) . . . . .	tons	42,053	48,374	53,000	63,093	46,140
Lead concentrate . . . . .	"	503,356	515,573	537,193	601,709	638,717
Lead-copper concentrate . . . . .	"	10,424	12,083	12,227	12,558	12,827
Lead ore(f) . . . . .	"	24,906	19,221	18,224	51,461	52,410
Lead-zinc middlings . . . . .	"	..	14,254	14,685	5,373	3,246
Manganese ore . . . . .	"	100,369	312,540	559,967	732,077	833,818
Mineral sands—						
Ilmenite concentrate . . . . .	"	441,034	513,011	544,216	551,501	656,693
Leucoxene concentrate . . . . .	"	380	756	696	1,607	8,730
Monazite concentrate . . . . .	"	2,305	1,984	2,313	2,055	4,228
Rutile concentrate . . . . .	"	217,330	243,858	265,514	287,617	311,662
Xenotime concentrate . . . . .	"	..	..	18	18	38
Zircon concentrate . . . . .	"	226,863	235,649	283,682	294,195	341,720
Molybdenite concentrate . . . . .	"	44,855	8,844	..	22,539	47
Nickel concentrate . . . . .	"	..	..	15,753	36,880	51,140
Osmiridium—native . . . . .	oz	..	..	..	12	..
Pyrite concentrate . . . . .	tons	204,011	245,998	252,748	165,265	132,804
Tantalite-columbite concentrate . . . . .	lb	25,581	10,550	79,587	238,134	202,868
Tin concentrate(g) . . . . .	tons	6,237	7,604	8,557	10,420	13,812
Tungsten concentrates—						
Scheelite concentrate . . . . .	"	1,150	1,308	1,202	1,465	1,563
Wolfram concentrate . . . . .	"	487	498	448	559	734
Zinc concentrate . . . . .	"	604,211	638,788	702,792	718,311	785,942
Zinc ore . . . . .	"	..	(h)325	(h)198	2,700	11,200

## COAL

Black coal . . . . .	'000 tons	31,439	33,334	34,707	40,183	42,650
Semi-anthracite . . . . .	" "	70	45	38	31	22
Bituminous . . . . .	" "	28,228	30,045	31,299	36,665	39,008
Sub-bituminous . . . . .	" "	3,140	3,243	3,370	3,488	3,621
Brown coal (lignite)(i) . . . . .	" "	20,659	21,783	23,384	22,971	23,128
Brown coal briquettes . . . . .	" "	1,908	1,857	1,849	1,553	1,471

## CRUDE PETROLEUM (INCLUDING NATURAL GAS)

Crude oil . . . . .	'000 bls	2,622	3,390	7,600	13,877	14,064
Natural gas . . . . .	mil. cu ft	143	143	152	216	2,874
Natural gas condensate . . . . .	bls	122	121	..	..	2,333

For footnotes see next page.

## QUANTITY OF MINERALS PRODUCED: AUSTRALIA, 1965 TO 1968-69—continued

Mineral	1965	1966	1967	1968	1968-69(a)
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## CONSTRUCTION MATERIALS

Sand(f)	'000 tons	11,444	10,666	11,149	14,406	16,711
Gravel(f)	"	7,760	8,549	9,048	8,340	10,343
Dimension stone	"	467	241	286	275	286
Crushed and broken stone	"	39,733	46,796	46,268	44,375	42,925
Other	"	21,363	22,216	25,202	26,581	23,376

## OTHER NON-METALLIC MINERALS

Asbestos	short tons	11,566	13,468	600	897	821
Barite	tons	11,976	13,724	15,666	39,155	45,579
Clays—						
Brick and shale	'000 tons	5,056	5,187	5,697	6,422	7,077
Other(f)	"	1,007	952	961	1,396	1,275
Diatomite	tons	7,063	7,592	11,103	6,725	2,643
Dolomite	"	258,661	256,008	290,659	316,731	305,644
Felspar (including cornish stone)	"	8,726	7,259	4,450	4,838	5,742
Garnet concentrate	"	130	239	591	167	322
Gypsum	"	833,521	801,552	914,084	843,744	894,560
Limestone (including shell and coral)	'000 tons	7,516	7,730	8,355	8,470	9,078
Lithium ores	tons	310	933	667	738	817
Lithia (Li <sub>2</sub> O) content	units(k)	1,302	3,919	2,906	3,112	3,443
Loam—for foundry moulding	tons	15,580	19,506	n.a.	n.a.	n.a.
Magnesite, crude	"	26,362	19,556	23,653	23,146	23,343
Mineral pigments—red ochre	"	227	272	358	526	654
Peat(l)	"	1,049	1,043	1,305	1,321	1,813
Pebbles—for grinding	"	764	1,544	1,389	1,049	795
Perlite	"	4,519	5,715	11,770	5,744	10,557
Phosphate rock	"	655	645	703	501	1,933
Pyrophyllite	'000 tons	151	..	..	..	1,001
Salt	tons	320,937	347,123	443,555	542,680	618,427
Serpentine	"	2,554	2,664	1,183	2,115	1,908
Silica	"	19,719	17,327	17,779	38,280	41,506
Sillimanite	"	..	..	..	..	..
Talc (including steatite and chlorite)	"	..	..	..	..	..

(a) Year ended 30 June. (b) Includes copper precipitate. (c) Includes cupreous ore for fertiliser. (d) Includes iron concentrate. (e) For cement manufacture, coal washing, flux and gas purification. (f) Includes silver-lead ore, silver-lead slimes and lead slag. (g) Includes tin-copper concentrate. (h) Zinc ore for fertiliser. (i) Includes brown coal used for briquette production. (j) Incomplete, owing to difficulties of coverage. (k) 1 unit = 22.4 lb. (l) Comprises peat for fertiliser and peat moss.

NOTE. Particulars of the production of uranium concentrate are not available for publication.

## Contents of metallic minerals produced

The following tables show the contents of metallic minerals produced in 1968-69 and earlier years.

**CONTENTS OF METALLIC MINERALS PRODUCED  
STATES AND NORTHERN TERRITORY, 1968-69**

<i>Content of metallic minerals produced</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>Aust.</i>
Alumina (Al <sub>2</sub> O <sub>3</sub> ) . . . '000 tons	4	2	2,414	..	787	..	..	3,207
Antimony . . . tons	854	..	..	..	..	..	..	854
Beryllium oxide (BeO) . . . units(a)	1	..	..	..	122	..	..	123
Bismuth . . . lb	..	..	20,720	..	..	..	400,960	421,680
Cadmium . . . tons	1,117	..	..	..	..	77	16	1,210
Cobalt . . . " "	113	..	..	..	99	..	..	212
Copper . . . " "	13,881	30	79,700	89	1,665	18,632	8,018	122,015
Gold . . . fine oz	9,784	8,613	77,031	68	479,124	39,544	115,401	729,565
Iron(b) . . . '000 tons	..	..	..	4,053	14,872	(c)1,008	568	20,502
Lead . . . tons	257,379	..	116,816	79	876	15,218	1,166	391,534
Manganese(d) . . . " "	5,499	..	..	..	75,613	257	291,156	372,525
Manganese dioxide (MnO <sub>2</sub> )(e) . . . " "	..	..	..	30	..	..	118	148
Molybdenum disulphide (MoS <sub>2</sub> ) . . . lb	124	..	89,500	..	..	..	..	89,624
Monazite . . . tons	652	..	419	..	2,713	..	..	3,784
Nickel . . . " "	..	..	..	6,086	..	..	..	6,086
Silver . . . '000 fine oz	9,786	..	10,422	2	166	1,789	325	22,490
Sulphur(f) . . . tons	220,171	..	..	34,259	7,508	50,575	1,323	313,836
Tantalite-columbite (Ta <sub>2</sub> O <sub>5</sub> + Nb <sub>2</sub> O <sub>5</sub> ) . . . lb	..	..	..	..	17,645	..	..	17,645
Tin . . . tons	1,485	41	1,129	..	638	4,084	34	7,411
Titanium dioxide (TiO <sub>2</sub> ) . . . " "	203,281	..	102,669	..	358,502	1,598	..	666,050
Tungstic oxide (WO <sub>3</sub> ) . . . units(a)	49	..	12,162	..	..	148,800	2,100	163,111
Yttrium oxide (Y <sub>2</sub> O <sub>3</sub> ) . . . lb	..	..	..	..	16,312	..	..	16,312
Zinc . . . tons	303,453	..	78,285	3,360	..	50,617	1,670	437,385
Zirconium dioxide (ZrO <sub>2</sub> ) . . . " "	137,884	..	50,853	..	40,338	2,159	..	231,234

(a) 1 unit = 22.4 lb. (b) Excludes iron content of iron oxide not intended for metal extraction. (c) Contained in iron concentrate. (d) Content of metallurgical grade manganese ore and zinc concentrate. (e) Content of manganese ore of other than metallurgical grade. (f) Sulphur content of pyrite and other minerals from which sulphur is recovered.

NOTE. Particulars of production of uranium oxide (U<sub>3</sub>O<sub>8</sub>) are not available for publication.

**CONTENTS OF METALLIC MINERALS PRODUCED: AUSTRALIA, 1965 TO 1968-69**

<i>Content of metallic minerals produced</i>	<i>1965</i>	<i>1966</i>	<i>1967</i>	<i>1968</i>	<i>1968-69</i>
Alumina (Al <sub>2</sub> O <sub>3</sub> ) . . . '000 tons	613	939	2,258	2,633	3,207
Antimony . . . tons	944	971	930	842	854
Beryllium oxide (BeO) . . . units(a)	457	637	675	178	123
Bismuth . . . lb	..	717	25,536	403,200	421,680
Cadmium . . . tons	1,155	1,212	1,324	1,359	1,210
Chromic oxide (Cr <sub>2</sub> O <sub>3</sub> ) . . . " "	10	..	44	27	..
Cobalt . . . " "	90	84	146	235	212
Copper . . . " "	90,388	109,537	90,361	107,906	122,015
Gold . . . fine oz	877,643	916,985	805,336	781,782	729,565
Iron(b) . . . '000 tons	4,297	6,956	10,928	(c)16,920	(c)20,502
Lead . . . tons	362,137	364,898	375,779	382,671	391,534
Manganese(d) . . . " "	55,280	151,401	264,660	345,099	372,525
Manganese dioxide (MnO <sub>2</sub> )(e) . . . " "	1,652	4,091	228	134	148
Molybdenum disulphide (MoS <sub>2</sub> ) . . . lb	41,911	5,549	..	19,164	89,624
Monazite . . . tons	2,165	1,836	2,163	1,849	3,784
Nickel . . . " "	..	..	2,061	4,603	6,086
Osmiridium . . . oz	..	..	..	12	..
Platinum . . . " "	..	13	..	..	..
Silver . . . '000 fine oz	17,281	18,888	19,842	21,394	22,490
Sulphur(f) . . . tons	345,554	371,567	392,371	349,990	313,836
Tantalite-columbite (Ta <sub>2</sub> O <sub>5</sub> + Nb <sub>2</sub> O <sub>5</sub> ) . . . lb	10,281	5,698	32,906	56,179	17,645
Tin . . . tons	3,849	4,807	5,586	6,537	7,411
Titanium dioxide (TiO <sub>2</sub> ) . . . " "	448,318	516,745	552,894	578,720	666,050
Tungstic oxide (WO <sub>3</sub> ) . . . units(a)	117,672	130,776	119,210	144,552	163,111
Yttrium oxide (Y <sub>2</sub> O <sub>3</sub> ) . . . lb	..	..	9,475	9,500	16,312
Zinc . . . tons	349,231	369,341	400,527	415,722	437,385
Zirconium dioxide (ZrO <sub>2</sub> ) . . . " "	151,035	156,581	188,462	195,585	231,234

(a) 1 unit = 22.4 lb. (b) Iron oxide for metal extraction. (c) Includes iron contained in iron concentrate. (d) Content of metallurgical grade manganese ore and zinc concentrate. (e) Content of manganese ore of other than metallurgical grade. (f) Sulphur content of pyrite and other minerals from which sulphur is recovered.

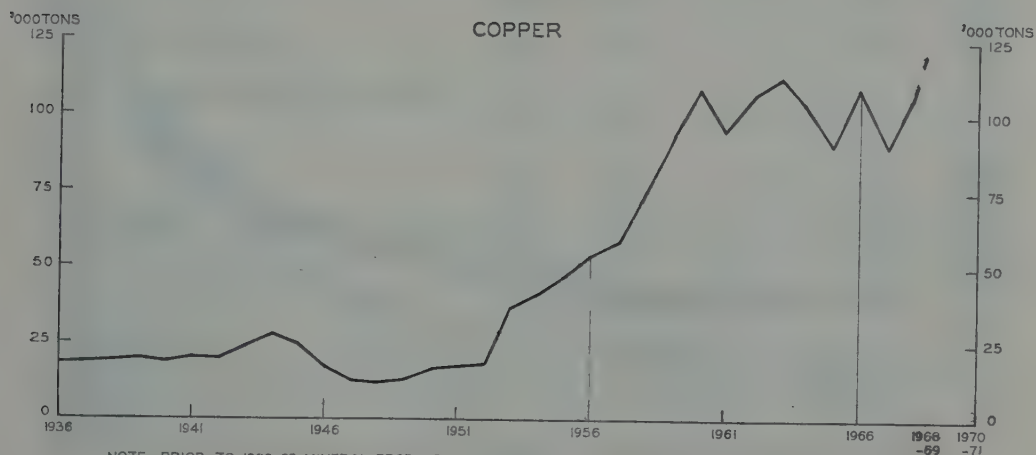
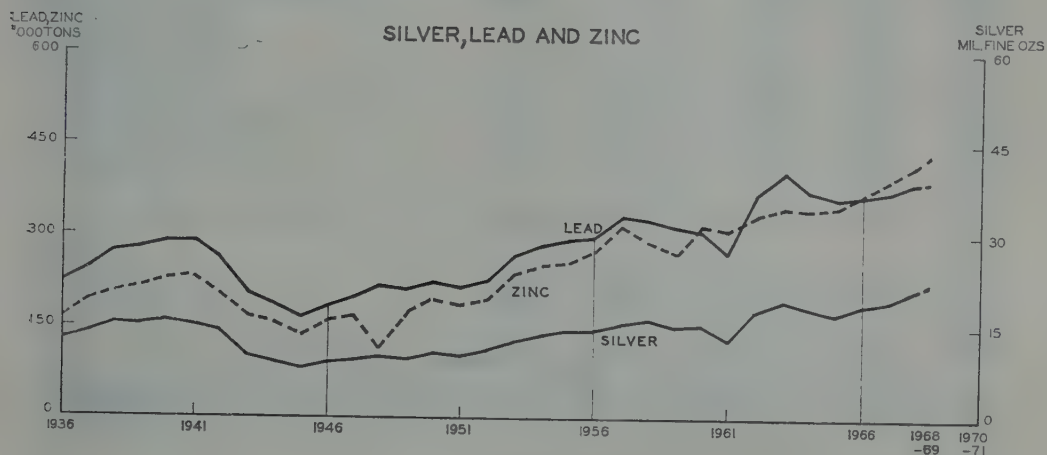
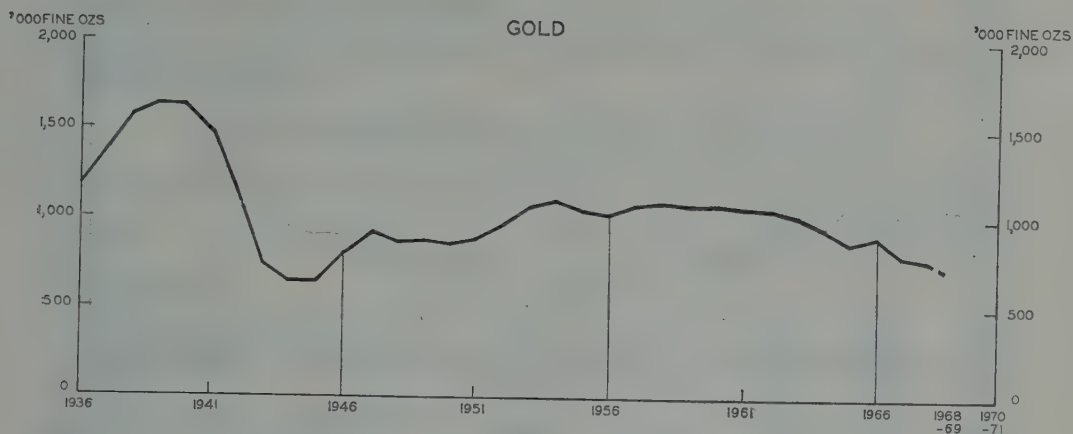
NOTE. Particulars of production of uranium oxide (U<sub>3</sub>O<sub>8</sub>) are not available for publication.



# MINE PRODUCTION OF PRINCIPAL METALS: AUSTRALIA

(METALLIC CONTENT OF MINERALS)

1936 TO 1968-69



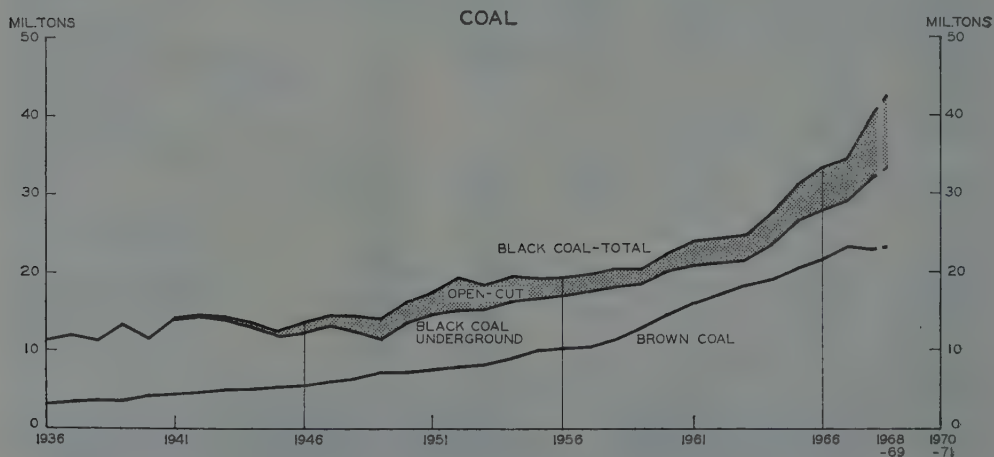
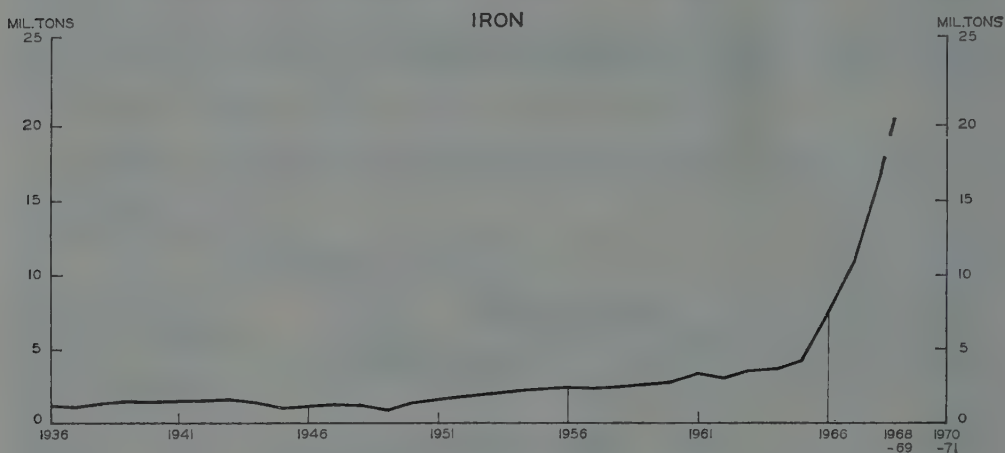
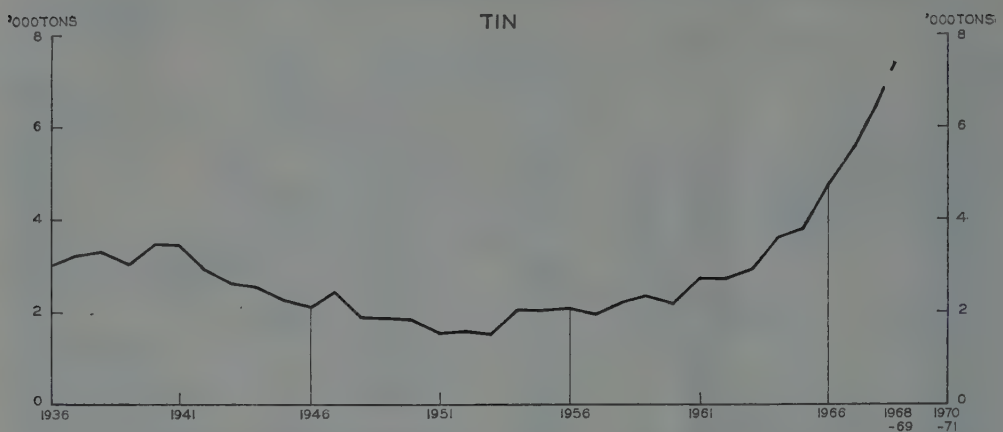
NOTE. PRIOR TO 1968-69 MINERAL PRODUCTION FIGURES WERE COLLECTED ON A CALENDAR YEAR BASIS

PLATE 47

# MINE PRODUCTION OF PRINCIPAL METALS AND PRODUCTION OF COAL

(METALLIC CONTENT OF MINERALS)

1936 TO 1968-69



NOTE. PRIOR TO 1968-69 MINERAL PRODUCTION FIGURES WERE COLLECTED ON A CALENDAR YEAR BASIS

Graphs showing details of the mine production of principal metals (metallic content) and coal from 1936 to 1968-69 are included on plates 47 and 48, pages 929 and 930.

### Value of minerals produced, 1965 to 1968-69

Particulars of the values of minerals (mine and quarry products) produced are shown in the following table. The values represent the selling value at the mine or quarry of minerals produced during the years concerned.

### VALUE OF MINERALS PRODUCED: AUSTRALIA, 1965 TO 1968-69 (\$'000)

	1965	1966	1967	1968	1968-69(a)
<b>Metallic minerals—</b>					
Bauxite . . . . .	4,600	(b)	(b)	(b)	(b)
Copper ore, concentrate, etc. . . . .	50,790	87,523	72,515	92,396	106,469
Gold ore, concentrate, other forms, etc. . . . .	25,619	26,371	24,456	23,525	22,953
Ilmenite concentrate . . . . .	3,755	4,242	4,390	4,752	5,380
Iron ore . . . . .	14,640	41,728	82,994	131,482	193,435
Lead and lead-silver ore and concentrate, lead-copper concentrate, etc. . . . .	87,947	76,831	73,654	89,705	85,699
Manganese ore . . . . .	808	3,462	8,007	8,358	10,734
Nickel concentrate . . . . .			(b)	(b)	(b)
Pyrite concentrate . . . . .	3,040	(b)	(b)	1,842	1,713
Rutile concentrate . . . . .	15,038	17,088	19,615	21,528	23,413
Tin concentrates . . . . .	12,237	14,332	15,011	16,691	19,200
Tungsten concentrates . . . . .	2,692	4,469	4,509	5,514	6,723
Zinc ore and concentrate . . . . .	36,818	32,890	29,354	30,398	35,397
Zircon concentrate . . . . .	6,136	8,255	10,937	10,967	11,515
Other metallic minerals . . . . .	548	610	1,251	3,354	4,488
<i>Total, metallic minerals</i> . . . . .	<i>264,668</i>	<i>327,633</i>	<i>370,892</i>	<i>468,353</i>	<i>563,077</i>
<b>Coal—</b>					
Black coal . . . . .	143,703	151,380	160,099	188,785	198,713
Brown coal . . . . .	18,436	20,064	20,686	21,555	20,880
<i>Total, coal</i> . . . . .	<i>162,139</i>	<i>171,444</i>	<i>180,785</i>	<i>210,340</i>	<i>219,593</i>
<b>Crude petroleum (including natural gas)—</b>					
Crude oil . . . . .	5,266	9,148	21,200	39,191	39,589
Natural gas (including condensate) . . . . .	78	81	86	116	925
<i>Total, crude petroleum</i> . . . . .	<i>5,344</i>	<i>9,229</i>	<i>21,286</i>	<i>39,307</i>	<i>40,513</i>
<b>Construction materials(c)</b> . . . . .	80,183	83,449	91,789	96,812	115,062
<b>Other non-metallic minerals(c)</b> . . . . .	29,244	31,921	31,946	36,928	41,987
<b>Total, all minerals and construction materials</b> . . . . .	<b>541,578</b>	<b>623,678</b>	<b>696,701</b>	<b>851,742</b>	<b>980,231</b>
New South Wales . . . . .	266,856	262,358	274,123	298,392	314,802
Victoria . . . . .	48,927	53,075	57,339	59,026	58,648
Queensland . . . . .	98,965	138,483	135,379	185,753	209,432
South Australia . . . . .	39,465	41,954	40,449	42,064	72,325
Western Australia . . . . .	49,070	78,918	134,319	195,498	234,854
Tasmania . . . . .	28,998	34,561	34,688	44,968	59,250
Northern Territory . . . . .	8,309	13,283	19,316	24,846	29,370
Australian Capital Territory . . . . .	986	1,046	1,087	1,195	1,550

(a) Year ended 30 June. (b) Not available for publication. (c) Incomplete owing to difficulties of coverage.  
NOTE. Particulars of the value of uranium concentrate produced are not available for publication.

**VALUE OF MINERALS PRODUCED: MINING ESTABLISHMENTS AND OTHER PRODUCERS(a)**  
**AUSTRALIA, 1968-69**  
 (\$'000)

	<i>Value of mining products</i>		
	<i>Mining establishments</i>	<i>Other producers</i>	<i>Total</i>
Mineral group—			
Metallic minerals	561,379	1,698	563,077
Coal	219,199	394	219,593
Crude petroleum (including natural gas)	40,513	..	40,513
Construction materials	94,083	(b)20,978	115,062
Other non-metallic minerals	31,403	(c)10,584	41,987
<b>Total</b>	<b>946,577</b>	<b>33,654</b>	<b>980,231</b>
New South Wales	300,863	13,940	314,802
Victoria	53,838	4,810	58,648
Queensland	206,330	3,102	209,432
South Australia	65,444	6,881	72,325
Western Australia	233,207	1,645	234,854
Tasmania	56,977	2,273	59,250
Northern Territory	28,438	932	29,370
Australian Capital Territory	1,480	70	1,550

(a) See page 924. (b) Principally producers classified to the construction and transport industries, local government authorities and other small producers. (c) Principally brick and cement manufacturing establishments producing clay and limestone.

## Overseas participation in Australian mining industry

### Introduction

Any attempt to provide statistical information on the extent of overseas participation in local industry involves difficult problems of statistical concept and measurement. Broadly, there are two ways in which overseas participation may be measured. One is to examine the financial accounts of Australian companies and compare the value of *assets* of companies in which there is significant overseas investment with those of other Australian companies. The other is to examine the *operations* (as expressed in terms of production, wages and salaries, output, etc.) of establishments of Australian companies in which there is significant overseas investment and compare their operations with those of establishments of other Australian companies. The second method has been adopted for a series of studies in overseas participation in the Australian mining industry.

### Scope of the statistics

The statistics relate to the operations of establishments employing four or more persons in the mining and quarrying industry as defined for the annual mining and quarrying census except for establishments engaged in construction material quarrying and clay mining, which are excluded.

### Classification of companies

The extent of overseas participation in the mining industry is measured by the operations of the establishments of companies in which there is direct investment from overseas, as determined by the annual survey of overseas investments. These are defined as follows.

- (i) Companies in Australia in which at least 50 per cent of the ordinary shares (or voting stock) is held by individual shareholders or companies resident in one overseas country, or where 25 per cent or more of the ordinary shares (or voting stock) is held by one company, or a group of companies, incorporated in one overseas country.
- (ii) Branches of companies incorporated overseas and registered in Australia as foreign companies.
- (iii) Wholly and partly owned subsidiaries and sub-subsidiaries, etc., of companies included in (i) and (ii) above.



Investment in ordinary shares or voting stock of Australian companies, including companies in which there is direct investment from overseas, where the proportion of shares held in a single country falls below the percentages specified in (i) above is defined as portfolio investment. Because of the difficulties encountered in determining the proportion of ordinary shares or voting stock of individual Australian companies held by portfolio investors overseas, the figures for overseas participation in the mining industry exclude participation by way of portfolio investment.

#### Further information available

In the following tables the degree of overseas participation is expressed in terms of net value of production only. Further details in terms of the value of power, fuel and materials used, local value of production, value of additions and replacements to fixed assets, salaries and wages paid, and average number of persons employed, as well as the value of production, may be found in the mimeographed bulletin *Overseas Participation in Australian Mining Industry*, 1968. The terms 'net . . .' and 'local value of production' are defined in Chapter 30, Miscellaneous.

### OVERSEAS OWNERSHIP AND CONTROL

In analysing the extent of overseas participation in local industry it is usual to distinguish between two aspects, overseas ownership and overseas control.

#### Overseas ownership

Statistics which give a general indication of the degree of overseas ownership in terms of the net value of production of Australian mining establishments are presented in the two following tables. In the compilation of these statistics the data for an establishment of a company in which there is no direct investment from overseas are allocated wholly to Australian ownership. The data relating to an establishment of a company in which there is direct investment from overseas are apportioned to overseas and Australian ownership according to the proportion of the ordinary shares (or voting stock) of the company that is held by the direct overseas investors.

However, an exception has been made to the strict application of the definition of direct overseas investment in the measurement of overseas ownership of the Australian mining industry. This exception is designed to take account of a small number of important cases of portfolio investment where overseas companies participated in a consortium of companies which made the initial decision to develop a major mining project. The participation of these companies in the initial decision for the development of the mining project implies a kind of participation different from that normally associated with portfolio investment and more akin to direct investment. Special arrangements have been made therefore, to include in the measurement of overseas ownership, investment by overseas companies whose participation is represented by 10 per cent or more of the ordinary shares of such projects. This participation is not taken into account in statistics of overseas control. This change has had a minor effect on statistics of overseas ownership of the Australian mining industry for 1966 and earlier years.

#### MINING(a): NET VALUE OF PRODUCTION APPORTIONED TO AUSTRALIAN AND DIRECT OVERSEAS OWNERSHIP, BY INDUSTRY, 1966 TO 1968

Industry and ownership	Value (\$'000)			Proportion Australian and overseas (per cent)		
	1966	1967	1968	1966	1967	1968
Metal mining—						
Australian(b)	144,588	149,095	187,939	53.7	50.0	49.0
Overseas	124,622	149,013	195,907	46.3	50.0	51.0
Fuel mining—						
Australian(b)	109,844	118,253	134,156	76.9	74.4	67.7
Overseas	32,918	40,593	63,966	23.1	25.6	32.3
Non-metal (excluding fuel) mining—						
Australian(b)	10,830	10,870	11,767	81.1	80.4	80.0
Overseas	2,521	2,658	2,938	18.9	19.6	20.0
Total mining—						
Australian(b)	265,262	278,218	333,863	62.4	59.1	56.0
Overseas	160,061	192,264	262,811	37.6	40.9	44.0
Grand total	425,323	470,483	596,674	100.0	100.0	100.0

(a) Excludes construction material quarrying and clay mining.

(b) Includes ownership by overseas portfolio investors.

**MINING(a): NET VALUE OF PRODUCTION APPORTIONED TO DIRECT OVERSEAS OWNERSHIP(b), BY COUNTRY AND BY PROPORTION OF DIRECT OVERSEAS EQUITY, 1966 TO 1968**

Country, and proportion of direct overseas equity	Value (\$'000)			Proportion(c) (per cent)		
	1966	1967	1968	1966	1967	1968
<b>Country—</b>						
United Kingdom . . . . .	79,891	90,095	102,957	18.7	19.2	17.2
United States of America . . . . .	64,613	87,256	142,806	15.2	18.5	23.9
Other . . . . .	15,557	14,913	17,048	3.7	3.2	2.9
<b>Proportion of direct overseas equity—</b>						
25 per cent but less than 50 per cent . . . . .	3,094	7,527	8,303	0.7	1.6	1.4
50 per cent but less than 75 per cent . . . . .	47,901	37,642	56,836	11.3	8.0	9.5
75 per cent and over . . . . .	109,066	147,095	197,672	25.6	31.3	33.1
<b>Total apportioned to direct overseas ownership . . . . .</b>	<b>160,061</b>	<b>192,264</b>	<b>262,811</b>	<b>37.6</b>	<b>40.9</b>	<b>44.0</b>

(a) Excludes construction material quarrying and clay mining.  
(c) Of total net value of mining production.

(b) Excludes ownership by overseas portfolio investors.

### Overseas control

The statistics in the following tables provide an indication of the relative importance of mining establishments of companies in which there is direct overseas investment. The concept of direct overseas investment is directly related to the concept of overseas control, and the statistics in these tables provide a measure of the net value of production of mining establishments of companies which can be regarded as subject to a degree of overseas control. The statistics have been derived by allocating data relating to each mining establishment wholly to either one or the other of the following categories: (i) establishments of direct overseas investment companies; (ii) other establishments.

The classification of establishments of companies in which 50 per cent of the voting stock is held in one overseas country (or 25 per cent by one overseas company) as subject to a degree of overseas control is, of course, based on a statistical convention. Such a convention is needed because of the lack of specific information as to the arrangements for managerial control of individual companies. The convention adopted for this study (including the actual percentages used) is the one suggested by the International Monetary Fund for use in the absence of other information. There are avenues of control other than through direct equity interest, e.g. through franchise or patent rights, marketing arrangements, financial commitments, etc. Such arrangements, of course, also typically exist between companies in which there is direct investment and their overseas parent companies and associated companies. Further, ownership of less than 25 per cent of voting stock may, in some cases, be sufficient to achieve effective control of a company's activities, just as in other cases ownership of more than 25 per cent of voting stock may not constitute control. In addition, the relationship between overseas parent companies and their Australian branches and subsidiaries covered by the statistics in the following tables can be one of *potential* rather than *actual* control.

A special problem does exist, however, in the strict application of the definition of direct overseas investment described above to the measurement of overseas control. This occurs where a single overseas company has an equity interest in an Australian company which is 25 per cent or more but less than 50 per cent. In such cases, a single Australian company may have an equity interest which is greater than the equity interest of the direct overseas investment company. To overcome this problem, an examination has been made of all companies engaged in mining in which the direct overseas equity is 25 per cent or more but less than 50 per cent. Where an Australian company holds a greater proportion of the equity than the direct overseas investment company the company is not regarded as subject to a degree of overseas control and is classified to 'other establishments'. However, this departure from the strict application of the definition of direct overseas investment to the measurement of overseas control does not affect the statistics for 1966 and earlier years.

**MINING(a): NET VALUE OF PRODUCTION ATTRIBUTED TO DIRECT OVERSEAS  
AND AUSTRALIAN CONTROL, BY INDUSTRY, 1966 TO 1968**

Industry and category of control	Value (\$'000)			Proportion (per cent)		
	1966	1967	1968	1966	1967	1968
Metal mining—						
Overseas . . . . .	167,191	193,531	264,008	62.1	64.9	68.8
Australian . . . . .	102,019	104,577	119,839	37.9	35.1	31.2
Fuel mining—						
Overseas . . . . .	40,927	51,703	78,735	28.7	32.5	39.7
Australian . . . . .	101,835	107,143	119,387	71.3	67.5	60.3
Non-metal (excluding fuel) mining—						
Overseas . . . . .	3,669	3,862	4,205	27.5	28.5	28.6
Australian . . . . .	9,681	9,667	10,501	72.5	71.5	71.4
Total mining—						
Overseas . . . . .	211,788	249,096	346,947	49.8	52.9	58.1
Australian . . . . .	213,535	221,387	249,727	50.2	47.1	41.9
<b>Grand total . . . . .</b>	<b>425,323</b>	<b>470,483</b>	<b>596,674</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Excludes construction material quarrying and clay mining.

**MINING(a): NET VALUE OF PRODUCTION ATTRIBUTED TO DIRECT OVERSEAS  
CONTROL, BY PROPORTION OF DIRECT OVERSEAS EQUITY, 1966 TO 1968**

Proportion of direct overseas equity	Value (\$'000)			Proportion(b) (per cent)		
	1966	1967	1968	1966	1967	1968
25 per cent but less than 50 per cent . . . . .	7,948	17,492	19,217	1.9	3.7	3.2
50 per cent but less than 75 per cent . . . . .	91,913	72,851	109,685	21.6	15.5	18.4
75 per cent and over . . . . .	111,927	158,753	218,045	26.3	33.7	36.5
<b>Total attributed to overseas control . . . . .</b>	<b>211,788</b>	<b>249,096</b>	<b>346,947</b>	<b>49.8</b>	<b>52.9</b>	<b>58.1</b>

(a) Excludes construction material quarrying and clay mining. (b) Of total net value of mining production.

## Mineral exploration (other than for petroleum)

### Definition

Mineral exploration (other than for petroleum) consists of the search for, and/or appraisal of, new ore occurrences and known deposits of minerals (including extensions to deposits being worked) by geological, geophysical, geochemical, and other methods (including drilling). Exploration for water is excluded. The construction of shafts and adits is included if primarily for exploration purposes. Excluded are mine development activities (which include the construction of drives, shafts, winzes, etc.) in underground mines and the preparation of quarrying sites for open-cut extraction (including overburden removal) carried out primarily for the purpose of commencing or extending mining and quarrying operations. Mine development activities (including mines under development) are included in the scope of the annual mining census.

### Sources of statistics

The statistics of exploration for minerals *other than petroleum* are derived from the annual mineral exploration census (excluding petroleum exploration), which is carried out by this Bureau in association with some State Mines Departments.

### Period covered

For 1968 and earlier years the annual mineral exploration census (excluding petroleum exploration) related to years ended 31 December. As from 1968–69, the reporting period for this census has been changed to a year ended 30 June, to conform with a similar change in the annual mining census. It should be noted that data for the six months ended 31 December 1968 are included in both the 1968 and 1968–69 figures in these tables.



**Scope of mineral exploration census**

The scope of the census comprises the following activities.

(a) *Private exploration on production leases*—relates to exploration carried out on the production lease by privately operated mines currently producing or under development for production of minerals other than petroleum. This also includes particulars of exploration within their production leases by business undertakings operated by State government authorities. Mines included in this section of the mineral exploration census are practically the same as those in the annual mining census (see section, *Mineral industry statistics*, page 912 for further details) with the exception of a limited number of itinerant prospectors and small mines for which information was not collected.

(b) *Private exploration on other licensed areas*—relates to exploration carried out on areas covered by exploration licences, authorities to enter, authorities to prospect, and similar licences and authorities issued by State Governments for exploration for minerals other than petroleum.

(c) *Other private exploration*—relates to exploration for minerals other than petroleum, which is not directly connected with areas under lease, licence, etc., including general surveys, aerial surveys, report writing, map preparation and other off-site activities not directly attributable to particular leases or licence areas.

(d) *Exploration by government*—relates to exploration for minerals other than petroleum carried out by—

(i) Commonwealth Government (Bureau of Mineral Resources, Geology and Geophysics, and Joint Coal Board), and

(ii) State Mines Departments.

Prior to 1968 the scope of the census was limited to private exploration on lease or licence areas held for production and exploration purposes, and all Government exploration. The scope was broadened for the 1968 census to include other private exploration activity as described in (c) above.

**Expenditure, employment, footage drilled, etc., States and Northern Territory**

The following table shows expenditure, employment and footage drilled, etc., on mineral exploration other than for petroleum in each State and the Northern Territory during the years 1966 to 1969-70.

**MINERAL EXPLORATION (OTHER THAN FOR PETROLEUM)  
STATES AND NORTHERN TERRITORY, 1966 TO 1969-70**

EXPENDITURE(a) (\$'000)					
	1966(b)	1967(b)	1968	1968-69(c)	1969-70(c)
<b>PRIVATE EXPLORATION</b>					
New South Wales . . . . .	4,872	4,594	5,620	7,272	16,562
Victoria . . . . .	1,231	1,452	1,476	1,600	2,353
Queensland . . . . .	8,340	11,657	13,343	18,018	25,078
South Australia . . . . .	1,358	1,203	2,661	2,961	5,760
Western Australia . . . . .	6,534	10,203	23,148	35,412	59,821
Tasmania . . . . .	2,870	2,180	2,059	2,408	3,278
Northern Territory . . . . .	2,909	3,532	4,156	4,891	5,241
<i>Total</i> . . . . .	<i>28,115</i>	<i>34,822</i>	<i>52,463</i>	<i>72,562</i>	<i>118,094</i>
<b>GOVERNMENT EXPLORATION</b>					
Commonwealth(d) . . . . .	1,923	2,803	3,529	3,591	3,995
State Mines Departments . . . . .	1,649	1,768	2,329	2,939	2,708
<i>Total</i> . . . . .	<i>3,572</i>	<i>4,571</i>	<i>5,858</i>	<i>6,530</i>	<i>6,704</i>
<b>TOTAL EXPENDITURE</b>					
On drilling . . . . .	13,994	15,490	20,448	26,196	33,522
Other . . . . .	17,693	23,903	37,873	52,896	91,276
<b>Australia</b> . . . . .	<b>31,687</b>	<b>39,393</b>	<b>58,321</b>	<b>79,092</b>	<b>124,798</b>
Payments to contractors(e) . . . . .	8,380	12,181	18,506	27,721	40,963

For footnotes see next page.



MINERAL EXPLORATION (OTHER THAN FOR PETROLEUM)  
STATES AND NORTHERN TERRITORY, 1966 TO 1969-70—continued

EMPLOYMENT(f) ( <sup>'000</sup> man-weeks worked)					
	1966(b)	1967(b)	1968	1968-69(c)	1969-70(c)
PRIVATE EXPLORATION					
New South Wales . . . . .	19.2	22.5	20.9	26.1	30.7
Victoria . . . . .	8.3	5.6	7.0	6.3	5.7
Queensland . . . . .	35.6	27.2	33.3	36.5	48.4
South Australia . . . . .	3.2	3.6	7.2	9.2	10.9
Western Australia . . . . .	23.2	37.6	52.8	67.5	103.3
Tasmania . . . . .	9.9	7.4	7.5	7.4	8.8
Northern Territory . . . . .	8.8	8.8	11.0	10.8	12.7
<i>Total</i> . . . . .	108.2	112.6	139.6	163.9	220.5
GOVERNMENT EXPLORATION					
Commonwealth(d) . . . . .	11.1	14.2	11.9	11.7	16.5
State Mines Departments . . . . .	15.0	15.9	13.7	17.0	20.9
<i>Total</i> . . . . .	26.1	30.1	25.5	28.7	37.4
TOTAL					
By professional persons(g) . . . . .	44.0	46.7	49.9	57.6	73.1
By non-professional persons(h) . . . . .	90.3	96.0	115.2	135.0	184.8
<i>Australia</i> . . . . .	134.3	142.7	165.1	192.6	257.9
FOOTAGE DRILLED, SUNK OR DRIVEN ( <sup>'000</sup> ft)					
PRIVATE EXPLORATION					
New South Wales . . . . .	946	908	1,031	1,146	1,528
Victoria . . . . .	179	182	128	141	137
Queensland . . . . .	1,515	2,029	1,669	1,873	1,959
South Australia . . . . .	183	161	227	250	614
Western Australia . . . . .	640	907	1,768	2,493	6,344
Tasmania . . . . .	169	152	149	177	192
Northern Territory . . . . .	248	259	303	352	292
<i>Total</i> . . . . .	3,880	4,598	5,273	6,432	11,066
GOVERNMENT EXPLORATION					
Commonwealth(d) . . . . .	6	6	15	21	28
State Mines Departments . . . . .	194	290	282	314	283
<i>Total</i> . . . . .	200	296	297	335	311
TOTAL FOOTAGE DRILLED, SUNK OR DRIVEN(i)					
Drilled—core . . . . .	1,645	1,727	2,003	2,641	3,045
non-core . . . . .	2,375	3,138	3,445	3,916	8,101
Sunk or driven . . . . .	59	30	122	210	231
<i>Australia</i> . . . . .	4,080	4,896	5,570	6,767	11,376

(a) Expenditure whether charged as working expenses or capitalised. (b) Excludes 'Other private exploration', not collected prior to 1968: see text. (c) Year ended 30 June. (d) Bureau of Mineral Resources and Joint Coal Board. (e) Included in expenditure shown above. Comprises amounts paid to drilling contractors, geological consultants, technical advisers, etc., for exploration services. (f) Operator and staff only (includes time spent on report writing and similar off-site activities associated with exploration); excludes contractors and their employees. (g) Geologists, geophysicists, engineers, etc., engaged on exploration work. (h) Drill operators, field hands, etc. (i) 'Sunk or driven' relates to shafts, winzes, etc., sunk and drives, adits, etc., driven.

## Petroleum exploration

### Source of statistics

These statistics were collected and compiled by the Bureau of Mineral Resources, Geology and Geophysics, Canberra. Statistical and other information relating to petroleum exploration is published by the Bureau of Mineral Resources in *The Petroleum Newsletter* (issued quarterly), *The Australian Mineral Industry—Annual Review and Expenditures on Petroleum Exploration and Development*, 1965 (B.M.R. Record No. 1966 (205)).

### Scope

Petroleum exploration consists of the search for, and/or appraisal of, deposits of crude petroleum and/or gas by geological, geophysical, geochemical, and other means, including drilling. Included in the expenditure are the costs of drilling exploratory oil and/or gas wells and the testing of such wells. Also included are the cost of access roads, site construction, permits, licences and similar fees, relevant office buildings and furniture, transportation equipment, storage facilities, plant and equipment, and review work, where these are undertaken primarily for purposes of exploration for deposits of petroleum or natural gas. The cost of drilling developmental oil and/or gas wells and expenditure on production facilities and pipelines, and production costs, etc., are excluded.

### Operations

The following tables show particulars of expenditure, and wells and footage drilled in petroleum exploration in recent years.

#### EXPENDITURE ON PETROLEUM EXPLORATION BY PRIVATE ENTERPRISE AND BY GOVERNMENTS: AUSTRALIA, 1965 TO 1969 (\$'000)

	1965	1966	1967	1968	1969
<b>PRIVATE SOURCES(a)</b>					
Utilised in—					
New South Wales . . . . .	3,640	1,706	1,284	1,126	2,473
Victoria . . . . .	3,796	7,007	17,557	20,403	19,567
Queensland . . . . .	14,883	13,670	5,116	5,392	7,157
South Australia . . . . .	4,559	4,059	6,257	3,261	4,311
Western Australia . . . . .	14,245	15,267	12,047	22,118	26,806
Tasmania . . . . .	829	1,293	2,424	998	1,837
Northern Territory . . . . .	6,246	6,367	6,978	6,222	7,075
<i>Australia</i> . . . . .	<i>48,197</i>	<i>49,369</i>	<i>51,662</i>	<i>59,519</i>	<i>69,226</i>
<b>GOVERNMENT SOURCES</b>					
<b>Payments under <i>Petroleum Search Subsidy Act</i> 1959–1969—</b>					
Utilised in—					
New South Wales . . . . .	633	724	516	474	548
Victoria . . . . .	609	640	727	1,940	441
Queensland . . . . .	3,818	2,194	1,767	1,419	1,524
South Australia . . . . .	949	769	1,058	1,407	609
Western Australia . . . . .	2,487	3,355	3,441	4,027	6,286
Tasmania . . . . .	107	570	469	497	903
Northern Territory . . . . .	1,157	1,365	1,657	1,448	2,561
<i>Total subsidy payments, Australia</i> . . . . .	<i>9,759</i>	<i>9,617</i>	<i>9,635</i>	<i>11,212</i>	<i>12,871</i>
Utilised for—					
Geophysical . . . . .	5,311	4,910	4,512	3,590	3,557
Drilling . . . . .	4,448	4,707	5,123	7,622	9,315
<b>Other Government sources—</b>					
Commonwealth(a) . . . . .	3,824	3,649	4,508	4,756	4,238
State Mines Departments . . . . .	711	767	466	783	832
<i>Total other sources, Australia</i> . . . . .	<i>4,535</i>	<i>4,416</i>	<i>4,974</i>	<i>5,539</i>	<i>5,070</i>
<i>Total Government sources, Australia</i> . . . . .	<i>14,294</i>	<i>14,033</i>	<i>14,609</i>	<i>16,751</i>	<i>17,941</i>
<b>TOTAL FUNDS, PRIVATE AND GOVERNMENT</b>					
<i>Australia</i> . . . . .	<i>62,491</i>	<i>63,402</i>	<i>66,271</i>	<i>76,270</i>	<i>87,166</i>

(a) Excludes payments under the *Petroleum Search Subsidy Act* 1959–1969.

### WELLS AND FOOTAGE DRILLED IN PETROLEUM EXPLORATION STATES AND TERRITORIES, 1969(a)

		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Total
Wells drilled(b)	No.	8	32	49	14	206	3	6	318
Average total depth of wells drilled	ft	3,794	6,685	5,752	4,597	7,500	3,257	9,429	6,150
Wells completed as potential oil producers	No.	..	10	..	..	97	..	..	107
Wells completed as potential gas producers	"	..	1	13	1	7	..	..	22
Wells drilled or drilling over 10,000 feet	"	..	9	3	..	9	..	3	24
Footage drilled—									
Completed wells	ft	30,353	234,651	244,272	64,355	636,818	9,770	36,583	1,256,802
Uncompleted holes(c)	"	3,984	29,300	30,723	..	10,871	..	4,044	78,922
<b>Total footage drilled</b>	<b>ft</b>	<b>34,337</b>	<b>263,951</b>	<b>274,995</b>	<b>64,355</b>	<b>647,689</b>	<b>9,770</b>	<b>40,627</b>	<b>1,335,724</b>

(a) With the exception of 'average total depth of wells drilled', these data include particulars for developmental wells.  
(b) Number of holes which reached total depth during the year. (c) Wells suspended or drilling at 31 December.

### WELLS AND FOOTAGE DRILLED IN PETROLEUM EXPLORATION AUSTRALIA, 1965 TO 1969(a)

		1965	1966	1967	1968	1969
Wells drilled(b)	No.	208	134	274	225	318
Average total depth of wells drilled	ft	5,401	6,155	5,573	6,135	6,150
Wells completed as potential oil producers	No.	25	12	174	64	107
Wells completed as potential gas producers	"	20	14	13	22	22
Wells drilled or drilling over 10,000 feet	"	16	19	11	15	24
Footage drilled—						
Completed wells	ft	1,057,325	687,041	986,079	959,067	1,256,802
Uncompleted holes(c)	"	83,849	68,781	53,862	59,889	78,922
<b>Total footage drilled</b>	<b>ft</b>	<b>1,141,174</b>	<b>755,822</b>	<b>1,039,941</b>	<b>1,018,956</b>	<b>1,335,724</b>

(a) With the exception of 'average total depth of wells drilled' for 1967, 1968 and 1969, these data include particulars for developmental wells. (b) Number of holes which reached total depth during the year. (c) Wells suspended or drilling at 31 December of the year shown.

## Mineral processing and treatment

The extraction of minerals from ore deposits, as in mining and quarrying, is only part of the wider field of mineral technology. It is only in rare instances that minerals can be used directly in the form in which they are produced by mines, and, much more commonly, minerals must undergo considerable processing and treatment before their full utility and value can be realised. Examples of this processing and treatment are the smelting and refining of metals, the production of coke from coal, the refining of oil, and the treatment of non-metallic minerals as in the production of superphosphate and other chemicals and building materials like bricks and cement. The sectors of the economy which carry out this work are classified for statistical purposes to the manufacturing industry, and particulars relating to those activities which principally involve mineral processing and treatment—i.e. the treatment of non-metalliferous mine and quarry products, the manufacture of mineral oils and chemical fertilisers, the smelting, converting, refining and rolling of iron and steel, the extracting and refining of other metals, and the manufacture of alloys are given in Chapter 22, Manufacturing Industry.

### Principal products

The following table shows particulars of the production of certain important manufactured products of mineral origin during the years 1964–65 to 1968–69.

**PRODUCTION OF PRINCIPAL MANUFACTURED PRODUCTS  
OF MINERAL ORIGIN: AUSTRALIA, 1964-65 TO 1968-69**

<i>Commodity</i>		1964-65	1965-66	1966-67	1967-68	1968-69
<b>METALS(a)</b>						
<b>Non-ferrous—</b>						
Alumina . . . . .	tons	175,398	227,077	474,716	1,136,208	1,591,802
Refined aluminium . . . . .	"	85,497	87,222	92,826	87,733	109,998
Blister copper(b) . . . . .	"	57,880	98,529	77,788	75,344	109,582
Refined copper . . . . .	"	53,441	91,588	74,313	72,166	94,732
Lead bullion (for export)(b) . . . . .	"	63,827	81,709	84,690	101,477	132,218
Refined lead . . . . .	"	199,032	188,197	192,384	186,908	175,289
Refined zinc . . . . .	"	189,395	196,534	197,030	187,325	228,224
Refined tin . . . . .	"	2,931	3,524	3,224	3,955	3,960
<b>Ferrous—</b>						
Pig iron . . . . .	'000 tons	3,936	4,380	4,893	5,209	5,722
Steel ingots . . . . .	"	5,131	5,561	6,057	6,298	6,599
<b>Precious—</b>						
Refined gold(c) . . . . .	'000 f oz	871	774	726	655	622
Refined silver . . . . .	"	8,939	8,766	9,825	9,693	9,134
<b>FUELS</b>						
<b>Coal products—</b>						
Metallurgical coke . . . . .	'000 tons	3,118	3,179	3,365	3,678	4,106
Brown coal briquettes . . . . .	"	1,893	1,883	1,820	1,745	1,471
<b>Petroleum products—</b>						
Motor spirit . . . . .	mil. gal	1,482	1,524	1,763	1,897	2,023
Furnace fuel . . . . .	'000 tons	4,869	5,340	5,759	6,206	6,113
Automotive distillate . . . . .	"	1,603	1,829	2,167	2,344	2,579
Industrial diesel fuel . . . . .	"	862	859	901	984	1,038
<b>BUILDING MATERIALS</b>						
Clay bricks . . . . .	millions	1,353	1,360	1,361	1,440	1,612
Portland cement . . . . .	'000 tons	3,746	3,688	3,661	3,805	3,978
Plaster of paris . . . . .	"	277	266	261	278	282
Plaster sheets . . . . .	'000 sq yd	29,937	29,917	30,601	32,809	35,291
<b>CHEMICALS</b>						
Sulphuric acid . . . . .	'000 tons	1,635	1,781	1,991	1,892	1,853
Caustic soda . . . . .	tons	68,879	75,229	91,009	98,190	105,478
Superphosphate . . . . .	'000 tons	3,703	4,265	4,430	3,935	3,938

(a) Excludes secondary metal with exception of steel ingots. (b) Metallic content. (c) Newly-won gold of Australian origin.

## Overseas trade

### Exports and imports

Data of imports and exports of minerals and mineral products have been extracted from the official trade statistics compiled in the Commonwealth Bureau of Census and Statistics. Particulars of the quantities and values (\$ f.o.b. port of shipment) of the principal minerals and mineral products exported from and imported into Australia during the years 1967 to 1968-69 are shown in the following table.



**EXPORTS AND IMPORTS OF PRINCIPAL MINERALS AND MINERAL PRODUCTS  
AUSTRALIA, 1967, 1968 AND 1968-69**

Commodity(a)	Quantity			Value (\$'000 f.o.b.)			
	1967	1968	1968-69(b)	1967	1968	1968-69(b)	
EXPORTS(c)							
Alumina	tons	n.a.	n.a.	n.a.	29,489	60,454	75,806
Aluminium and aluminium base alloys—							
Unworked shapes	"	10,501	5,577	8,226	4,926	2,745	4,304
Rolled, drawn and extruded shapes	"	4,835	3,985	2,704	3,304	2,449	1,850
Coal	"	9,250,297	12,096,102	13,814,749	76,203	103,745	117,103
Copper—							
Ore and concentrate	"	44,830	36,494	41,073	9,526	8,657	9,769
Blister	"	6,893	7,063	7,551	8,627	9,459	9,938
Ingots, pigs (refined)	"	9,325	16,518	26,649	8,975	16,810	27,337
Rolled, drawn and extruded shapes	"	7,043	7,164	10,101	8,102	8,381	11,645
Gold, refined	fine oz	537,922	385,976	447,929	16,942	13,126	15,894
Ilmenite concentrate	tons	384,300	395,911	495,231	3,896	4,090	5,229
Iron and steel—							
Iron ore	"	9,017,084	16,134,492	20,071,987	75,372	139,816	179,515
Pig iron	"	149,587	241,869	346,183	6,169	8,925	13,105
Ingots, blooms and slabs	"	398,635	470,527	424,838	23,719	27,474	23,858
Tinplate	"	56,252	42,576	44,029	7,452	5,359	5,410
Scrap	"	475,056	401,801	481,982	14,226	10,389	11,751
Lead—							
Ore and concentrate	"	124,016	121,122	113,343	23,166	23,636	22,020
Lead-silver bullion	"	100,394	107,325	126,348	26,901	34,457	39,262
Pig	"	147,558	137,542	115,415	30,282	28,419	24,994
Manganese ore	"	314,762	555,743	629,531	6,933	10,827	11,837
Opals	"	..	..	..	8,635	10,653	11,883
Petroleum oils—							
Gasolines and solvents	'000 gal	55,593	90,814	67,698	6,582	10,075	7,412
Kerosenes	"	21,655	31,815	19,558	2,553	3,720	2,367
Automotive distillate, industrial and marine diesel fuels and heavy distillate, n.e.i.	"	62,964	62,677	48,291	5,310	5,467	4,225
Residual oils	"	123,441	98,553	70,289	5,851	6,291	3,984
Lubricating oil	"	28,664	21,703	24,804	8,577	6,707	7,497
Rutile concentrate	tons	258,791	284,995	286,080	19,692	21,865	22,844
Silver—refined ingot bar	fine oz	5,249,220	15,812,371	11,666,551	7,173	31,705	21,695
Tin ores and concentrates	tons	3,452	5,366	6,387	4,567	7,574	8,959
Tungsten concentrates—							
Scheelite concentrate	"	1,239	1,434	1,771	3,316	3,532	4,407
Wolfram concentrate	"	399	497	679	1,096	1,294	1,929
Zinc—							
Ore and concentrate	"	297,927	321,027	332,619	19,873	21,660	21,820
Refinery type shapes	"	96,471	97,177	115,562	23,562	22,597	27,291
Zircon concentrate	"	247,179	266,121	295,989	10,720	11,013	11,952
IMPORTS							
Alumina	tons	37,047	2,964	2,972	2,543	351	504
Aluminium, refined ingots	"	361	11,975	11,160	232	5,822	5,437
Asbestos	short "	52,584	66,741	59,962	6,435	8,318	7,628
Diamonds—							
Gemstone	m carat	27,520	31,499	35,526	4,301	4,727	5,246
Industrial	"	525,053	669,931	461,321	1,980	2,725	2,299
Gold, unrefined bullion(d)	fine oz	128,127	122,758	114,276	4,019	4,133	4,075
Ferro-alloys	tons	23,491	23,418	22,188	6,689	6,401	5,316
Nickel—pig, ingot anodes	tons	1,536	1,914	1,784	3,068	3,848	3,554
Petroleum oils—							
Crude	'000 gal	4,038,853	4,202,570	4,297,344	167,008	169,892	174,792
Enriched crude and other refinery feedstock	"	999,338	956,716	874,342	43,976	43,100	39,453
Gasolines and solvents	"	141,888	158,605	148,814	13,949	15,379	13,650
Kerosene	"	33,563	29,118	29,306	3,515	3,146	3,116
Automotive distillate, industrial and marine diesel fuels and heavy distillate, n.e.i.	"	18,370	44,250	54,421	1,578	3,610	4,336
Residual oils	"	23,973	32,249	137,431	1,149	1,522	5,668
Lubricating oil	"	11,363	12,121	10,821	3,565	3,664	3,407
Phosphate rock	'000 tons	3,265	3,431	3,177	30,355	34,140	31,606
Potassium fertilisers	"	114,313	137,584	134,933	3,752	3,632	3,457
Sulphur	"	513,962	548,563	394,987	17,296	21,632	15,434
Tin, refined	"	693	159	143	2,066	448	415
Titanium oxide (pigments)	"	1,110	1,527	1,385	449	604	566

(a) In addition to the commodities listed, significant quantities of bauxite and nickel ores and concentrates are exported, but details are not available for publication. (b) Year ended 30 June. (c) Australian produce. (d) Gold content.

Considerable quantities of metallic ores, concentrates, slags, and residues are exported from Australia for refining overseas. The following table shows the quantities of selected items exported during 1968-69 and their principal metallic content as estimated by assay.

**PRINCIPAL METALLIC CONTENTS OF SELECTED ORES AND CONCENTRATES  
ETC., EXPORTED FROM AUSTRALIA, 1968-69**

	Metallic contents—estimated from assay								
Ores and concentrates, etc.	Copper	Lead	Zinc	Tin	Iron	Manganese	Tungstic oxide(a)	Gold	Silver
	tons	tons	tons	tons	'000 tons	tons	units	fine oz	'000 fine oz
Copper concentrate . . .	9,656	..	..	41	..	..	..	17,206	115
Blister copper . . .	7,519	..	..	..	..	..	..	60,094	36
Copper matte, slags, etc.(b) .	1,513	4,275	..	54	..	..	..	32	203
Lead concentrate . . .	1,371	76,529	6,690	..	..	..	..	25,170	2,479
Lead-silver bullion . . .	..	120,490	..	..	..	..	..	..	8,737
Lead slags and residues . . .	273	2,500	13	98	..	..	..	..	7
Zinc concentrate . . .	6	2,075	171,122	..	..	..	..	..	370
Zinc slags and residues . . .	6	23	4,166	3	..	..	..	..	..
Tin concentrate . . .	8	1	..	3,627	..	..	..	..	..
Iron ore—									
Pellets . . . . .	..	..	..	..	2,808	..	..	..	..
Fines . . . . .	..	..	..	..	1,320	..	..	..	..
Lump . . . . .	..	..	..	..	8,976	..	..	..	..
Manganese ore . . . . .	..	..	..	..	..	254,908	..	..	..
Scheelite concentrate . . . .	..	..	..	..	..	..	120,097	..	..
Wolfram concentrate . . . . .	..	..	..	..	..	..	49,800	..	..
Total metallic content . . . .	20,352	205,893	181,991	3,823	13,103	254,908	69,897	102,502	11,948

(a) 1 unit = 22.4lb.

(b) Includes copper matte, copper slags and residues and copper-lead dross and speiss.

## REVIEW OF RECENT DEVELOPMENTS IN THE AUSTRALIAN MINERAL INDUSTRY

Prior to Year Book No. 52 it was customary to include a series of detailed reviews of the principal commodities produced by the Australian mineral industry and recent developments concerning these commodities. However, with the increasing diversification and development of the industry, it has become impractical to continue these reviews in the Year Book and the reader who wishes to obtain information of this kind is referred to *The Australian Mineral Industry—Annual Review* published by the Bureau of Mineral Resources, Geology and Geophysics. That publication contains comprehensive reviews of mineral commodities of importance to the Australian economy, as well as a general review of the industry's performance during each year. Major developments in the industry, particularly during the last year, are reviewed briefly in subsequent parts of this section.

Expansion of the Australian mineral industry was maintained during 1970, with the preliminary value of mineral production increasing by 25 per cent from \$1,142 million in 1969 to \$1,425 million in 1970. The major reasons for this increase in the value of mineral production were a substantial increase in the production of crude oil, mainly from the Bass Strait fields in Victoria, the continued expansion of iron ore mining, and the increased production of black coal in New South Wales and Queensland. The total value of mineral exports continued to increase, mainly because of the increase of iron ore and coal shipments to Japan.

### Bauxite

The history of the aluminium industry and recent significant developments in the industry were reviewed in previous issues of the Year Book (No. 51, page 1168 and No. 52, page 1048). The year 1970 was a period of continued growth in the industry both in mining and processing as detailed below.

Bauxite production from deposits at Weipa, Queensland, increased to a rate of 7 million tons in 1970 following completion of a further stage in the development of the mine and associated township, and of ore treatment and loading facilities. Production capacity will be increased to 10.5 million tons annually by the end of 1972. Approximately 2.3 million tons from Weipa were used by the Gladstone, Queensland, alumina refinery in 1970, and the requirements of the small refinery at Bell Bay, Tasmania, are estimated as 120,000 tons yearly; the remaining production is available for export.

Bauxite deposits at Gove, Northern Territory, covering reserves of the order of 250 million tons of ore, are being developed by a consortium of seven Australian and one overseas companies. The consortium plans to construct an alumina plant at Gove by mid-1972 with an initial capacity of 500,000 metric tons per annum, increasing to 1,000,000 metric tons annually by mid-1973.

An agreement was signed in Perth in December 1968 with the Western Australian Government for the development of a bauxite/alumina project in the Admiralty Gulf area. A similar agreement was signed in November 1970 for the establishment of a second bauxite/alumina project based on the Darling Range bauxites, and involving an alumina refinery and port facilities at Bunbury.

### Alumina

Expansion of the alumina refinery at Gladstone, Queensland, was completed by the end of 1968, increasing the capacity of the refinery to 900,000 tons per annum; the plant has since been expanded to 1,275,000 tons yearly and will be increased further to 2,000,000 tons per annum by mid-1972. The alumina refinery at Kwinana, Western Australia, was expanded from 817,000 tons to 1,024,000 tons annually by July 1970 and to 1,230,000 tons by the end of 1970. Bauxite supplies for the Kwinana refinery are obtained from deposits 28 miles away at Jarrahdale, Western Australia, the reserves of which are assessed as 500 million tons. A new alumina plant will also be commissioned at Pinjarra, Western Australia, in mid-1972, with an initial production capacity of 413,000 tons yearly.

### Aluminium

Operating capacity of the smelter at Kurri Kurri, New South Wales, was steadily increased during 1970, and was scheduled to reach 44,600 tons annually by the end of that year, and the smelter will be expanded to 100,000 tons following the signing of an agreement with Kobe Steel Ltd for the supply of aluminium ingots. An aluminium powder and paste plant, capable of supplying the whole of Australia's needs, was commissioned in 1968 at Bell Bay, Tasmania. The capacity of the smelter at Bell Bay was increased to 94,000 tons per annum in early 1971. Additional capacity at Port Henry, Victoria, was commissioned in 1969 bringing the smelter's total operating capacity to 90,000 tons yearly. A letter of intent has been received by the Western Australian Government regarding the possible establishment of an aluminium smelter at Kwinana within the next decade.

### Copper

Copper production at Mount Isa will be increased to 150,000 tons yearly by 1974. The expansion programme provides for a new hoisting shaft, extensions to the existing copper smelter and a new concentrator, as well as enlargement of ancillary facilities.

A new copper-gold ore body is being developed near Tennant Creek, Northern Territory. The first stage of development, which will cost \$10 million, will have an installed mining capacity of 400,000 tons of ore per annum. Production commenced in mid-1971.

Since the beginning of 1967 the Australian Producers' price has been adjusted regularly to reflect movements in the London Metal Exchange daily settlement price. In the early part of 1970, after reaching a record 73 cents per pound (\$1,685.2 per long ton) in March, the Australian price eased to 61 cents (\$1,366.4 per long ton) by mid-June. It continued a downward trend throughout the latter half of the year and stood at 44 cents (\$985.6 per long ton) on 31 December.

### Iron

The major development of recent years has been the establishment in Australia of a large scale iron ore export industry based principally on steelmaking requirements in Japan. Exports of iron ore and iron ore pellets in 1970 to Japan and elsewhere were 40.4 million tons valued at \$325 million.

At Mount Tom Price, Western Australia, iron ore production capacity is being expanded from a 1970 level of 17.5 million tons per year to a level of 22.5 million tons per year by the end of 1971. At Paraburdoo, 35 miles south of Mount Tom Price, development of iron ore deposits is being accelerated so that the mine will be capable of producing at a rate of 5 million tons of ore per year by 1972 and 15 million tons per year by the end of 1972. Port capacity at Dampier, Western Australia, is to be expanded to handle the increased ore production from Mount Tom Price and the new production from Paraburdoo.

Shipments of iron ore from Mount Newman, Western Australia, commenced through Port Hedland in April 1969. As announced in 1970 capacity is being increased to enable ore to be mined and shipped at a rate of 25 million tons per year by 1972 and 30 million tons per year by 1974.

Annual production from the Mount Goldsworthy, Western Australia, iron ore project is being increased to 8 million tons by 1973. Production capacity at the existing Mount Goldsworthy mine has been increased and deposits at Shay Gap and Kennedy Gap nearby will be developed.



Construction of facilities for the mining of deposits of limonite at Robe River, Western Australia, commenced in 1970. Exports from the Robe River project are expected to commence in mid-1972 and build up to a minimum annual rate of 6.1 million tons of prepared sinter fines and 4.2 million tons of iron ore pellets by 1975.

Firm plans are in hand for the construction at Dampier, Western Australia, of a plant to produce metallised agglomerates. Early in 1970 it was announced that letters of intent had been signed for the purchase by Japanese buyers of 6.5 million tons of agglomerates. Delivery is proposed over 10 years from April 1973.

### **Lead and zinc**

Following record mine production of lead and zinc in 1969, resulting from completion of major mine expansion programmes at Mount Isa, Queensland, and Broken Hill, New South Wales, output of both metals was marginally lower in 1970 but in both cases well above the level of mine production in 1968. Mine production of lead was 442,800 tons, and of zinc 476,000 tons in 1970. Production of lead bullion at Mount Isa, and Cockle Creek, New South Wales, in 1970 was 169,700 tons, nearly 11 per cent higher than in 1969, but production of refined lead at Port Pirie, South Australia was cut back from 195,300 tons in 1969 to 187,800 tons in 1970 in response to the weakening world demand. Total production of refined zinc from Risdon, Tasmania, Port Pirie and Cockle Creek in 1970 was 256,478 tons, nearly 6 per cent higher than in 1969.

Further increases in production of zinc concentrates and refined zinc will result from a current programme of expansion at the Rosebery mine in Tasmania, a new mine at Beltana, South Australia, and expansion of the Risdon refinery. Expansion of existing electrolytic refining facilities and a new residue treatment plant at Risdon will increase capacity to 210,000 tons of zinc per annum by mid-1972. A decision to reduce production of crude lead at Mount Isa was announced early in 1971 and commencement of sinking one of the two major shafts at the new Hilton mine has been deferred until 1973. The Hilton mine is expected to become a major producer of lead and zinc in the late 1970's.

### **Black coal**

There has been a significant revival in the Australian black coal industry in recent years as a result of increased exports and increased consumption of black coal in iron and steel production and electricity generation. These increases have more than balanced reduced consumption in some applications due to competition from fuel oil.

The expansion of the export trade has been of major significance. In 1955 exports were about 200,000 tons valued at about \$1.7 million; in 1970 exports were 18.0 million tons valued at \$177.2 million. These increased exports have been almost wholly to Japan for use in the iron and steel industry. As a result of this increased demand, new mines have been opened and others are under development in Queensland and New South Wales, and many established mines are being expanded. Exploration for coal has been stimulated and further rich deposits of coking coal have been located, particularly in Queensland.

### **Petroleum**

At the end of 1970, there were five Australian oil fields in production, namely, Moonie and Alton Queensland; Barrow Island, Western Australia; and Barracouta and Halibut in the Gippsland Shelf area offshore from Victoria. Another major field, Kingfish also in the Gippsland Shelf area, was being drilled for production at the end of 1970. In addition, a small amount of oil is being produced from the Bennett field and several other wells in the Roma area in Queensland. In 1969 commercial and domestic use of natural gas began in Brisbane, Melbourne and Adelaide. The production of crude oil in 1970 from the Australian oil fields was 65,191,269 barrels representing 36 per cent of the country's requirement of refinery feedstock. The cumulative production of crude oil to 31 December, 1970 amounted to 111.5 million barrels.

In 1970, additional discoveries were made in the Cooper Basin in South Australia at Della, Strzelecki, Moorari, Packsaddle, Mudrangie, Yanpurra; at Palm Valley No. 2 and Petrel No. 1 in the Northern Territory, and at Noorindoo and Kincora in the Surat Basin, Queensland. The provisional figure for footage drilled in petroleum exploration and development in Australia in 1970 was 1,237,335 feet which is some 105,000 feet less than the footage drilled in the previous year. About 728,974 feet of the 1970 total was attributed to exploration drilling of which 255,487 feet were drilled offshore. A total of 212 wells was completed in 1970, of which 120 were exploration wells, 27 of them offshore. In comparison with the previous year there was an increase of some nine exploration wells and a decline of 119 development wells in 1970.



**Nickel**

Output from Australia's first major nickel mining operation at Kambalda in Western Australia has grown to more than 30,000 tons of nickel per annum since mining commenced in 1967. Mines at Nepean and Scotia also commenced production in early 1969 and a fourth mine is being developed at Carr Boyd Rocks; all of these mines are located in the Kalgoorlie area. At the end of 1970 the refinery at Kwinana, Western Australia, was producing more than 15,000 tons of nickel metal per annum from concentrates; the remaining concentrates will continue to be exported until further smelting and refining facilities are constructed.

Plans have been drawn for the development of the lateritic nickel deposit at Greenvale in Northern Queensland. Subject to the success of current pilot plant tests, construction of a railway and an ammonia leach treatment plant at Townsville, northern Queensland, is expected to commence in mid-1971. Production of 23,000 tons of nickel oxide sinter per annum could commence during 1974.

**Phosphate**

Major deposits of phosphate rock were discovered during 1966 near Duchess and Lady Annie in north-west Queensland. The deposits are large by world standards, and feasibility studies are still in progress. Survey work has finished on a possible railway route between Lady Annie and the Gulf of Carpentaria, 800 miles away. Transport and port facilities will be key factors in determining whether the project is to be undertaken.



## CHAPTER 28

# ELECTRIC POWER GENERATION AND DISTRIBUTION

This chapter is divided into three major parts: the Introduction, which deals briefly with the resources, generation and distribution, and future development of electric power in Australia; the Snowy Mountains Hydro-electric Scheme; and the origins, development, present situation and new projects of electrical systems in each Australian State and Territory.

The information contained in the chapter relates to situations existing and projects contemplated in December 1970, and may be considerably affected by changes in policy or plans, or by developments in the projects themselves. Greater descriptive and historical detail about the various systems is contained in earlier issues of the Year Book. Statistics on the electricity industry are included in tables in Chapter 22, Manufacturing Industry.

## INTRODUCTION

### Distribution of population and location of electric power resources in Australia

The two principal centres of population and industry in Australia, the metropolitan areas of Sydney and Melbourne, make the greatest demands for electric power, and their growth has been associated with the development of large deposits of coal located relatively close to the source of demand. This, together with the fact that the major water resources are also located in the south-eastern portion of Australia, materially influences the distribution of industrial population and the location of major electric power stations. By far the most important source of energy used in the production of electric power in Australia is coal. At 30 June 1970 thermal power equipment represented 70.7 per cent, hydro plant 26.9 per cent, and internal combustion and gas turbine equipment 2.4 per cent of the total installed generating capacity.

Most of Australia is poorly supplied with water, only about 13 per cent receiving an annual rainfall of 30 inches or over, and these areas are confined largely to Tasmania and to the narrow coastal strip along the east coast of the mainland. The only region on the mainland of Australia high enough to receive reliable winter snowfall, and from which, therefore, reasonably constant water supplies throughout the year can be expected, is the mountain chain which stretches from the high plateaux of south-eastern New South Wales to the north-eastern highlands of Victoria. The hydro-electric potential of this area is considerable, and plans have been formulated to develop more than 4,000,000 kW by 1975. The two major construction projects in this area are the Snowy Mountains and Kiewa schemes. Other hydro-electric potential does exist on the mainland on the rivers of the coastal areas of New South Wales and Queensland, but the amount available is smaller than the potential of the Alpine region. In Tasmania, hydro-electric resources have been estimated at about 50 per cent of the total Australian hydro-electric potential. On the mainland the chief source of energy is coal; in Tasmania it is water.

### Electric power generation and distribution

At the beginning of this century Australia's electrical undertakings were carried on mainly by private enterprise, but with some measure of governmental control designed to provide standards of safety and to define the scope and obligations of the private organisations. A trend towards public ownership commenced during the 1914-18 War and became more pronounced after the 1939-45 War. By 1961 all major generating stations supplying the public were, in varying degrees, under the control of statutory organisations constituted with the object of unifying and co-ordinating the generation and distribution of electricity supplies. There are still a large number of small private and municipal enterprises generating power for supply to country towns, although central authorities are extending supply to these places wherever practicable. In many areas it has been, and remains, the practice for central authorities to sell power in bulk to local distributing organisations which undertake reticulation.

In addition to the private, local government and statutory organisations which generate and or distribute electricity for sale, numerous firms generate power for use in their own establishments, particularly those engaged in mining remote from the main centres of population. This chapter, however, is concerned mainly with the activities of central electric stations, as the power regularly

produced for such internal consumption is, in any case, a relatively small proportion of the total power produced. The measures taken by authorities to satisfy the demand created by the post-war growth in population and building and by developments in industry and commerce are described in the following pages.

## SNOWY MOUNTAINS HYDRO-ELECTRIC SCHEME\*

### Snowy Mountains Hydro-electric Power Act 1949-1958

In July 1949 the Commonwealth Government established the Snowy Mountains Hydro-electric Authority, and empowered it to generate electricity by means of hydro-electric works in the Snowy Mountains Area; supply electricity to the Commonwealth (i) for defence purposes, (ii) for consumption in the Australian Capital Territory; and supply to a State, or to a State Authority, electricity not required for defence purposes or for consumption in the Australian Capital Territory.

The Snowy Mountains Act is supported by a detailed agreement between the States of New South Wales and Victoria and the Commonwealth with regard to the construction and operation of the Scheme, the distribution of power and water, charges to be made for electricity, and other such matters. The Snowy Mountains Council, established under the terms of the Agreement and consisting of representatives of the Commonwealth, the Authority and the two States, directs and controls the operation and maintenance of the permanent works of the Authority and the allocation of loads to generating stations.

### Snowy Mountains Hydro-electric Scheme

The broad basis of the Snowy scheme is to transfer waters, which would otherwise flow to the sea unharnessed, from the Snowy River and its tributaries to the inland system, so that the water may be used for irrigation and to provide power. It involves two main diversions, the diversion of the Eucumbene, a tributary of the Snowy, to the Upper Tumut River, and the diversion of the main stream of the Snowy River at Island Bend and Jindabyne to the Swampy Plain River. These two diversions divide the scheme geographically into two sections, the Snowy-Tumut Development and the Snowy-Murray Development (*see* plate 49 opposite). For purposes of both power production and irrigation it is necessary to regulate run-off, and this is achieved by the use of Lake Eucumbene (formed by the construction of Eucumbene Dam) and other storages to control the waters of the Eucumbene, Murrumbidgee, Tooma, and Tumut Rivers for the Snowy-Tumut Development and of the Snowy and Geehi Rivers for the Snowy-Murray Development. A sectional diagram of the scheme appears on plate 50, page 950.

*Snowy-Tumut Development.* This development comprises works for the diversion and regulation of the waters of the Eucumbene, Upper Tooma, Upper Murrumbidgee, and Upper Tumut Rivers and their combined development through a series of power stations down the Tumut River. A major dam has been constructed on the Eucumbene River to create Lake Eucumbene, which has an ultimate usable storage of 3.5 million acre feet. The waters of the Upper Murrumbidgee River are diverted into Lake Eucumbene by a dam at Tantangara and a 10½-mile tunnel from Tantangara Reservoir. From Lake Eucumbene the water flows through a 14-mile tunnel to Tumut Pond Reservoir on the upper reaches of the Tumut River, where it joins the waters of the Tumut River itself and the waters of the Tooma River diverted to Tumut Pond Reservoir by a diversion dam and a 9-mile tunnel.

From Tumut Pond Reservoir water is conveyed by pressure tunnel to Tumut 1 underground Power Station (capacity 320,000 kW), returned to the Tumut River and then by another pressure tunnel to Tumut 2 underground Power Station (capacity 280,000 kW), thence discharging into Talbingo Reservoir, also on the Tumut River.

Tumut 3 Power Station, the largest station of the scheme (generating capacity 1,500,000 kW) and pumping capacity 10,500 cubic feet per second) is being constructed below Talbingo Reservoir and will discharge into Jounama Pondage on the Tumut River. This pondage will provide a downstream pumping pool and also regulate discharges from Tumut 3 Power Station as required. Releases from Jounama Pondage then enter Blowering Reservoir formed by Blowering Dam. This dam, constructed by the Snowy Mountains Authority as an agent for the State of New South Wales, provides for the regulation of power station discharges for irrigation use in the Murrumbidgee Valley. The Authority has constructed a power station at the foot of the dam to generate power from releases of water for irrigation purposes.

*Snowy-Murray Development.* The principal features of the Snowy-Murray Development are the diversion of the main stream of the Snowy River by tunnels, shafts, and pipelines westwards through

\* *See also* Chapter 24 Water Conservation and Irrigation of this issue and special detailed article in Year Book No. 42, pp. 1103-30.



# SNOWY MOUNTAINS SCHEME

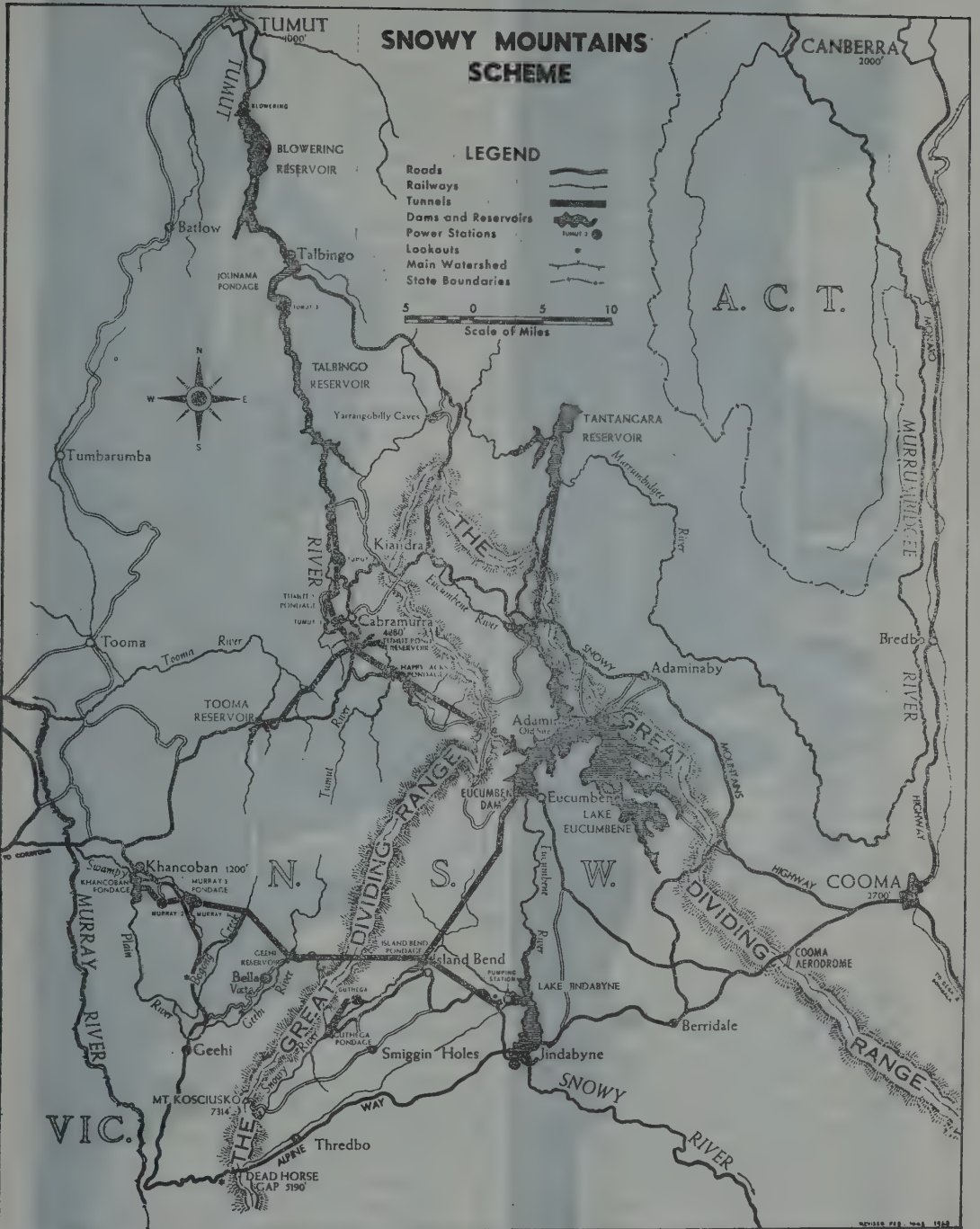


PLATE 49



the Great Dividing Range into the Swampy Plain River in the catchment of the Upper Murray, and the development of power on the western slopes of the Alps. The main works of the development are as follows.

- (a) A tunnel from the Snowy River near Island Bend through the Great Dividing Range to Geehi Reservoir on the Geehi River, and two power projects between Geehi Reservoir and the Swampy Plain River near Khancoban. The power stations associated with these two power projects, Murray 1 and Murray 2, have a combined capacity of 1,500,000 kW.
- (b) A tunnel from a dam on the Snowy River near Island Bend to Eucumbene Dam to carry Snowy water to Lake Eucumbene for storage at times of high river flows. When river flows are lower than average, this stored water is returned towards Island Bend and thence through the Snowy-Geehi Tunnel to Geehi Reservoir and Murray 1 and Murray 2 Power Stations.
- (c) A dam on the Snowy River near Jindabyne to store the residual flow of the Snowy and Eucumbene Rivers downstream from Island Bend and Eucumbene Dams, including the flows of major tributaries, the Crackenback and Mowamba Rivers; and a pumping plant, pipeline and tunnel to lift this water from Jindabyne Reservoir to the Snowy-Geehi Tunnel near Island Bend, where it joins the flow to the Geehi Reservoir for use through Murray 1 and Murray 2 Power Stations.

The power output of this section of the Scheme is increased by the Guthega Project, a subsidiary hydro-electric project on the Upper Snowy River above Island Bend with a generating capacity of 60,000 kW.

#### Utilisation of power from scheme

The future electric power plants on the mainland of Australia will be predominantly thermal or thermo-nuclear installations, and in an electrical system in which the greater part of the energy is generated in thermal plants it is usually found that the hydro installations operate to the best advantage on peak load. However, the existing New South Wales and Victorian systems include a proportion of relatively old and less efficient installations which, for reasons of fuel economy, are also best used for the production of peak load power. Therefore, in order to utilise the potential of the Snowy Mountains Scheme most effectively, the order of development was arranged so that the early stations operated, initially, somewhat below the peak of the system load, with a progressive change to predominantly peak load operation as construction proceeded and as the load increased in magnitude.

The Snowy Mountains Scheme is situated about midway between the principal load centres of Sydney and Melbourne and is connected to those cities by 330 kV transmission lines. It is, consequently, in a position to take advantage of the diversity in the power requirements of these two load systems, a most important factor in so far as it affects the economy of operation of the supply systems of the two States. Although most of the output from the scheme will go to the States of New South Wales and Victoria, the Commonwealth Government has the right to draw from the scheme its requirements of power and energy for the Australian Capital Territory and for defence purposes. For convenience, the Commonwealth's requirements are drawn from the New South Wales transmission network by an exchange arrangement between the Commonwealth and the Electricity Commission of New South Wales. Electricity over and above that required by the Commonwealth Government is divided between the States of New South Wales and Victoria in the ratio 2:1.

#### Progress of scheme and future programme

The scheme's first power station, Guthega, of 60,000 kW capacity, came into operation in February 1955. It was followed by Tumut 1, an underground power station with a capacity of 320,000 kW, in 1959, and by the 280,000 kW Tumut 2 underground Power Station in 1962. Eucumbene Dam, which provides the major regulating storage for the scheme, was completed in May 1958. Tumut Pond Dam, completed in September 1958, provides the balancing storage for the power stations of the Upper Tumut Works. The first trans-mountain diversion of water from Lake Eucumbene to the Tumut River at Tumut Pond was made possible when the 14-mile Eucumbene-Tumut Tunnel was completed in June 1959. The 10½-mile Murrumbidgee-Eucumbene Tunnel and the 9-mile Tooma-Tumut Tunnel came into operation early in 1961. Following the completion of the Upper Tumut Works, construction activity was concentrated on the Snowy-Murray Development. The first unit of this development, the Eucumbene-Snowy project which comprises Island Bend Dam and the 15-mile Eucumbene-Snowy Tunnel, commenced diverting Snowy River water to storage in Lake Eucumbene in August 1965. Completion of a 9-mile trans-mountain Snowy-Geehi Tunnel, the 7½-mile Murray 1 Pressure Tunnel, the first of the 1-mile long Pressure Pipelines, and the first two units of the 950,000 kW Murray 1 Power Station in April 1966 allowed the first diversion of the water from the Snowy River to the Murray River in the west. All of the ten turbo-generators were brought into commercial operation with the opening of the Murray 1 Project in July 1967.



Khancoban Dam, designed to regulate power station releases before their discharge into the Murray River, was completed in February 1966. The Murray 2 Project in the base of the open cut excavated in the bank of Khancoban Reservoir downstream of Murray 1 Project was completed in 1969. The four units of Murray 2 Power Station totalling 550,000 kW came into commercial operation in October 1969. The total installed capacity of the scheme has now reached 2,160,000 kW.

Construction is also complete on the Jindabyne Project. The earth and rockfill dam was completed in September 1967, and the pumping station and Jindabyne-Island Bend Tunnel came into service in February 1969.

Blowering Dam on the Tumut River came into service in May 1968, and the 80,000 kW Blowering Power Station is expected to begin commercial operation in October 1971 when the stored water in the Blowering Reservoir is to be released for the irrigation season downstream on the Murrumbidgee Irrigation Areas.

For the Tumut 3 Project the construction of Jounama Dam was completed in 1968 so that the storage of water in Blowering Dam could commence. Work is under way on the remaining sections of the Tumut 3 Project, and the six units in the power station are scheduled to be brought into service progressively from 1972 to 1974.

## STATES AND TERRITORIES

### New South Wales

In Year Book No. 39 an account was given in some detail of the origin and development of electricity generation and distribution in New South Wales. At present the following three main Acts govern electricity supply in New South Wales.

The Local Government Act, 1919, which lays down the various rights and responsibilities of local government bodies in the establishment and operation of electricity trading undertakings.

The Electricity Development Act, 1945, which established the Electricity Authority of New South Wales as the body responsible for the co-ordination of electricity supply throughout the State.

The Electricity Commission Act, 1950, which constituted the Electricity Commission of New South Wales as the major generating authority and not subject to the provisions of the Electricity Development Act.

#### Electricity Commission of New South Wales and electricity supply authorities

The main function of the Commission is the generation and transmission of electricity, which it sells in bulk to distributing authorities (mainly local government bodies) throughout a large part of the State, to the Government railways and to certain large industrial consumers. As the major generating authority, it is also responsible for the development of new power sources except in the Snowy Mountains region.

The retail sale of electricity to the public is, in general, carried out by separate electricity supply authorities. At 30 June 1970 there were 41 retail supply authorities throughout the State, comprising 34 electricity county councils (consisting of groups of shire and/or municipal councils), 2 city and 2 municipal councils, 1 shire council, and 2 private franchise holders. In addition to the Electricity Commission, 2 coal companies supply electricity in bulk to retail supplying authorities. Most of the small power stations which had operated in many country centres have closed down as the main transmission network has been extended.

Most electricity distribution areas have been consolidated into county districts consisting of a number of neighbouring local government areas grouped for electricity supply purposes, and administered by a county council comprising representatives elected by the constituent councils. Of the 225 cities, municipalities and shires in New South Wales, 217 are included in one or other of the thirty-four electricity county districts.

#### The Electricity Authority of New South Wales

The Electricity Development Act, 1945 confers broad powers on the Electricity Authority to co-ordinate and develop the public electricity supply industry. The functions of the Authority include the promotion of the use of electricity and especially its use for industrial and manufacturing purposes and for primary production. Technical advice is given to retail electricity supply authorities on various aspects of their activities such as the framing of retail electricity tariffs, public lighting and



standardisation of materials and equipment. The Authority acts in an advisory capacity to the Minister for Local Government on electricity distribution matters generally, and may make recommendations concerning the organisation of distribution, the amendment of the law relating to the generation, transmission, distribution and supply of electricity, or on any other matters affecting the electricity distribution industry.

The Authority administers the Rural Electricity Subsidy Scheme under which the rural electrical development of the State has now been virtually completed where the extension of supply is economically feasible. Under the subsidy scheme, local electricity suppliers receive subsidies from the authority towards the cost of new rural lines. At 30 June 1970 the Authority was committed to the payment of \$35,891,633 in subsidies, of which \$24,955,374 had been paid. Further details of the operation of the scheme are given on page 956, Year Book No. 56.

The Electricity Development Act contains provisions for the making of regulations relating to most aspects of electrical safety. Regulations now in force cover such matters as consumers' installations, licensing of electricians and electrical contractors, approval of electrical articles, safety of linesmen, and overhead line construction and maintenance. In addition, a number of aspects not governed by legislation are covered by codes of practice or recommended procedures.

The Authority also administers the Traffic Route Lighting Subsidy Scheme, which provides for financial assistance to councils towards the cost of installation of improved lighting on traffic routes traversing built-up areas with the objective of reducing the incidence of night road accidents. Since the introduction of the scheme in 1964, subsidy has been approved in respect of some 462 miles of traffic routes throughout the State.

### Generation and transmission

Of the State's electrical power requirements during the year ended 30 June 1970, 87.5 per cent was generated by coal fired power stations in New South Wales, 0.4 per cent by internal combustion plants, 9.9 per cent by hydro-electric stations (including 7.2 per cent obtained direct from the Snowy Mountains Scheme). Interstate imports accounted for 2.2 per cent of the State's electricity requirements.

*Major generating stations.* At 30 June 1970 the major power stations of the State system of the Electricity Commission of New South Wales and their effective capacities were as follows: Munmorah (Tuggerah Lakes), 1,400,000 kW; Vales Point (Lake Macquarie), 875,000 kW; Bunnerong (Sydney), 375,000 kW; Wangi (Lake Macquarie), 330,000 kW; Tallawarra (Lake Illawarra), 320,000 kW; Wallerawang (near Lithgow), 240,000 kW; Pyrmont (Sydney), 200,000 kW. The total effective capacity of the Electricity Commission's system as at 30 June 1970 was 4,377,000 kW. The greater part of the Commission's generating plant is concentrated within a hundred mile radius of Sydney.

*Major transmission network.* The retailing of electricity to 97 per cent of the population of New South Wales is in the hands of local distributing authorities, which obtain electricity in bulk from the Commission's major State network. This network of 330 kV, 132 kV, 66 kV and some 33 kV and 22 kV transmission lines, links the Commission's power stations with the load centres throughout the eastern portions of the State, extending geographically up to 400 miles inland.

At 30 June 1970 there were in service 1,246 route miles of 330 kV (including 64 miles operating for the time being at 132 kV) and 2,980 miles of 132 kV transmission lines (including 50 miles operating for the time being at 66 kV or lower). There were also in service 2,621 miles of transmission line of 66 kV and lower voltages, and 97 miles of underground cable. The installed transformer capacity at the Commission's 141 sub-stations was 16,621,000 kVA.

*Separate systems and total State installed capacity.* Several local government bodies operate their own power stations and generate portion of their requirements which is supplemented by inter-connection with the system of the Electricity Commission. Of these the more important are the Northern Rivers County Council (installed capacity 28,750 kW) and the North-West County Council (15,000 kW). In addition a private company operates small stations supplying the towns of Ivanhoe and Wilcannia. The aggregate effective capacity for the whole of New South Wales systems and isolated plants was 4,479,415 kW at 30 June 1970 and the number of ultimate consumers at this date was 1,564,796.

### Future development

The major new thermal stations already built and those now being developed on the coalfields will become the main base load supply sources for the State. Munmorah, located between Lakes Munmorah and Budgewoi, Vales Point and Wangi, on Lake Macquarie, Wallerawang, near Lithgow, and Tallawarra, on Lake Illawarra, have been completed.

The first 500,000 kW generating unit of the Liddell Power Station in the Hunter Valley is scheduled for commissioning in 1971 and the second, third and fourth units in 1972, 1973 and 1974. With a designed capacity of 2,000,000 kW Liddell is the biggest thermal power station yet planned for Australia.

Future projects include the installation of an additional 500,000 kW unit at Wallerawang, scheduled for commissioning in 1975, and two 660,000 kW units at Vales Point the first of which is expected to come into operation in 1977.

The development of the 330 kV main system is continuing. New work in hand includes the provision of 330 kV transmission from Liddell direct to Sydney and the construction of major 330 kV transmission centres at Armidale, Wagga Wagga, East Sydney, and later at Wellington. Plans to augment the transmission system during the next five years provide for the construction of 1,200 route miles of 330 kV lines, 1,000 miles of 132 kV overhead lines, and 15 new sub-stations.

### Hydro-electricity

The greater part of the hydro-electric potential of New South Wales is concentrated in the Snowy Mountains area (*see* Snowy Mountains Hydro-electric Scheme, page 948). Apart from this area, major hydro-electric stations are in operation at the Warragamba Dam (50,000 kW), Hume Dam (50,000 kW) and Burrinjuck Dam (20,000 kW). There are, in addition, five smaller hydro-electric installations in operation in various parts of the State.

## Victoria

In Year Book No. 39 a detailed description is given of the development of electricity generation in the cities of Melbourne, Geelong, Bendigo and Ballarat up to the time of transfer of control of electricity undertakings in those cities to the State Electricity Commission of Victoria. An account is also given of the events culminating in the establishment of the Commission in 1919, and of the early developments in the Commission's undertakings.

### State Electricity Commission of Victoria

Constituted by the *Electricity Commissioners Act* 1918, the State Electricity Commission is a semi-government authority administered since 1921 by a full-time Chairman and three part-time Commissioners. The principal duty of the Commission is to co-ordinate and extend on an economic basis the supply of electricity throughout Victoria. For this purpose it is vested with power to erect, own and operate power stations and other electrical plant and installations, supply electricity retail to individual consumers or in bulk to any corporation or public institution, acquire and operate electricity undertakings, develop, own and operate brown coal open cuts and briquetting works, and develop the State's hydro-electric resources. From its own revenues, which it controls, the Commission must meet all expenditure in the operation of its power and fuel undertakings and provide for statutory payments to State Consolidated Revenue.

The Commission is the controlling authority for all electrical undertakings in Victoria. It is responsible for the registration of electrical contractors, the licensing of electrical mechanics, the control of installation methods and material, and the testing and approval of electrical equipment and appliances. Incidental to its main operations, the Commission owns and operates the tramway systems in Ballarat and Bendigo.

Since it began operating in 1919 the State Electricity Commission has expanded and co-ordinated the production and supply of electricity on a State wide basis to the point where its system now generates almost all the electricity produced in Victoria and serves 99 per cent of the population. Victoria's electricity system is based on the utilisation of the extensive brown coal resources of the Latrobe Valley in Gippsland.

Output of brown coal in 1969-70 from the Commission's three open cuts at Yallourn, Morwell and Yallourn North totalled 22,789,000 tons, of which 18,210,000 tons were used in the Commission's power stations. A further 4,182,000 tons of brown coal were used to manufacture 1,541,000 tons of briquettes, of which 252,000 tons were burnt in power stations. The only other fuel used in power generation was 36,000 tons of oil.

Generation in thermal stations is supplemented by energy from the Commission's hydro stations in the mountains north-east of the State, and by hydro entitlements from the Snowy Mountains Scheme (one-third of the output after provision of the Commonwealth's needs) and Hume Power Station (half of the output).

### Electricity Supply

At 30 June 1970 the number of ultimate consumers in Victoria was 1,251,000 all served by the Commission except the extreme eastern settlements of Mallacoota (local generation) and Bendoc (supplied from an adjoining area of New South Wales).

The Commission sells electricity retail in all Victorian supply areas except for eleven metropolitan municipalities. These municipalities, retailing electricity under franchises granted before the Commission was established, take bulk supply from the Commission. Bulk supply is also provided to several New South Wales municipalities and irrigation settlements bordering the River Murray.

The Commission's retail consumers numbered over 1,015,000 at 30 June 1970. Of these some 849,000 were domestic, 76,000 industrial and 90,000 commercial. Retail supply is administered through the metropolitan branch and nine extra-metropolitan branches with headquarters located at Geelong, Dandenong, Taralgon, Mildura, Ballarat, Benalla, Bendigo, Colac and Horsham. At 30 June 1970 there were branch and district supply offices in Melbourne and all other major cities and towns in Victoria.

Complete electrification of the State has virtually been achieved. By 30 June 1970 over one million homes and 73,000 farms were supplied with electricity. Fewer than 3,000 homes and 1,250 farms in remote and isolated areas are now out of reach of public supply mains.

### Electricity production, transmission and distribution

Electricity generated in the State system or purchased by it totalled 13,454 million kWh in 1969-70. The system comprises a series of thermal and hydro-electric power stations. Inclusive of generator capacity both within the State and available to the Victorian system from outside the State, the total installed generator capacity at 30 June 1970 was 3,546,000 kW. Power stations are interconnected and feed electricity into a common pool for general supply. The major power station in the interconnected system is the Hazelwood brown coal burning power station near Morwell, which alone generates over 55 per cent of Victoria's electricity. Hazelwood, now completed, has eight 200,000 kW generating sets in service. Other power stations in the interconnected system comprise two further base load brown coal burning power stations, Morwell and Yallourn; steam stations in Melbourne (Newport, Richmond and Spencer Street), Geelong, Ballarat, and Red Cliffs, which has, in addition, some internal combustion plant; and hydro-electric stations at Kiewa, at Elidon, on the Rubicon and Royston Rivers near Eildon, and at Cairn Curran. All generators for public supply within Victoria are Commission-owned, except Spencer Street Power Station, which remains the property of the Melbourne City Council, although operated as a unit of the interconnected system, and a small generator at Mallacoota. The Victorian system is linked with the Snowy Mountains Scheme by a 330 kV transmission line, which also allows the interchange of energy between New South Wales and Victoria. The hydro station at Hume Dam on the River Murray is also linked with the Victorian interconnected system. Output and operating costs of this power station, owned by the Electricity Commission of New South Wales, are shared equally by the Electricity Commissions of Victoria and New South Wales.

The electrical transmission and distribution system in the State supply network at 30 June 1970 comprised nearly 61,000 miles of power-lines, 29 terminal receiving stations, 158 zone sub-stations, and more than 62,000 distribution sub-stations. Main transmission is by 500 kV, 330 kV, 220 kV and 66 kV power lines which supply the principal distribution centres and also provide interconnection between the power stations. The 500 kV, 330 kV and 220 kV systems total over 1,900 route miles.

### Future development

Yallourn 'W' Power Station, now under construction, is located about half a mile west of the present Yallourn Power Station. The station will be the fourth brown coal burning power project built by the Commission in the Latrobe Valley. Its capacity will be 700,000 kW, provided by two 350,000 kW turbo-generators, the first due to come into service in 1972 and the second in 1973.

With this project in operation, the State's power resources, including Victoria's entitlement from the Snowy Mountains Hydro Electric Authority, will have increased to 4,835,000 kW, 36 per cent above the capacity at June, 1970.

## Queensland

In Year Book No. 39 an account is given of the growth of electricity generation in Queensland, with particular reference to south-eastern Queensland, and of the events leading up to the establishment in 1937 of the State Electricity Commission of Queensland. In Year Book No. 53 an account is given of the post-war development and organisation of the electricity supply in Queensland.



Electricity supply in Queensland is governed by the following Acts which are administered by the Commission.

*'The State Electricity Commission Acts, 1937 to 1965.'* These Acts constituted the Commission and define its powers and duties.

*'The Electric Light and Power Acts, 1896 to 1967.'* These Acts relate to the constitution of electric authorities, except the Southern Electric Authority and the Northern Electric Authority, and define their powers and duties and the conditions under which electricity is to be supplied and used.

*'The Regional Electric Authorities Acts, 1945 to 1964.'* These Acts provide for the constitution of Regional Electricity Boards representative of the Commission and the Local Authorities within each region, and define their powers and responsibilities.

*'The Southern Electric Authority of Queensland Acts, 1952 to 1964.'* These Acts established the Southern Electric Authority and define the powers and responsibilities of the Authority.

*'The Northern Electric Authority of Queensland Acts, 1963 to 1964.'* These Acts established the Northern Electric Authority. They also define its powers and responsibilities.

*'The Electrical Workers and Contractors Acts, 1962 to 1968.'* These Acts provide for the certification of electrical workers and for the licensing of electrical contractors.

### State Electricity Commission of Queensland

The Commission commenced to function in January 1938. The Commission is the statutory authority concerned, *inter alia*, with the administration of electricity supply legislation, the general control, organisation and efficient development of the electricity supply industry in Queensland, the forward planning of such development, the control of electricity charges, the administration of regulations and rules relating to safety, the raising of capital, the provision of engineering and consulting services, the promotion of the use of electricity, particularly in manufacturing and rural industries, and the fixing of standards. In addition, it is an authority to which consumers may appeal on matters in dispute between them and their electric authorities. The Commission is also empowered to own and operate generating stations and transmission lines and to sell electricity in bulk.

### Organisation

Regional electrification, with centralised generation and main transmission, is the predominant feature of the organisation of the electricity supply industry in Queensland. The more populous eastern part of the State is served by three major networks.

The southern network embraces the areas of supply of the Southern Electric Authority, the Brisbane City Council, the Wide Bay-Burnett Regional Electricity Board, and the Dalby Town Council. Generation and main transmission in this area are the responsibility of the Southern Electric Authority, which sells energy in bulk to the other three Authorities. The Wide Bay-Burnett Board also operates its own base load power station at Howard. The Southern Electric Authority is also responsible for the distribution of electricity to a large rural area outside metropolitan Brisbane.

The central network is within the area of supply of the Capricornia Regional Electricity Board, which is responsible for the generation, main transmission and distribution of electricity.

The northern network covers the areas of supply of the Cairns, Townsville, and Mackay Regional Electricity Boards. Generation and main transmission are the responsibility of the Northern Electricity Authority, and electricity is purchased in bulk for distribution by the three Regional Electricity Boards. In addition, the Cairns Regional Electricity Board operates small internal combustion generating stations at certain isolated centres in its area, and the Townsville Regional Electricity Board supplies the western area of its region by means of a distribution system based on an internal combustion station at Hughenden.

At present there is no interconnection between these three main networks, but work has started on the construction of 275 kV transmission lines between central and southern Queensland, to link the two supply systems. West of the three main networks the form of organisation which has been adopted is determined by the stage of electrical development which has been reached. Immediately west of the Capricornia region the Central Western Regional Electricity Board operates with generation centralised at internal combustion stations at Longreach and Barcaldine. Other smaller regions of electricity supply are centred on Roma and Mount Isa. In addition, parts of southern Queensland are supplied by the Tenterfield Municipal Council and the North West County Council of New South Wales. In the remaining parts of Western Queensland there are a number of isolated electricity undertakings operated by Shire Councils.



The organisation of the industry in Queensland is moving progressively towards a greater integration of generating authorities so that the production of electricity can be centred to an increasing extent on larger and more efficient power stations.

#### **Electricity generation, transmission and distribution**

Electricity generated in the State is based primarily on black coal, 90.6 per cent of the total production during 1969-70 being derived from this fuel. Hydro-electric stations, located mainly in North Queensland, provided 8.5 per cent, and the balance of the production was provided from internal combustion and gas turbine stations. The gas turbine stations are located at Rockhampton, Swanbank and Middle Ridge, near Toowoomba and use fuel oil as their primary energy source. All of the internal combustion stations use oil as fuel but the power station at Roma uses locally produced natural gas and crude oil. Electricity generated in Queensland in power stations during 1969-70 totalled 5,818 million kWh. A further 68 million units were purchased in bulk from other producers of electricity for re-distribution to consumers.

At 30 June 1970 the total generating capacity of all Queensland power stations was 1,831,798 kW comprising 1,543,500 kW of steam plant, 135,208 kW of hydro-electric plant, 38,090 kW of internal combustion plant and 115,000 kW gas turbine plant. The southern electricity network is served by the following power stations: Bulimba 'A' (92,500 kW), Bulimba 'B' (180,000 kW), New Farm (75,000 kW), Tennyson 'A' (120,000 kW), Tennyson 'B' (120,000 kW), Swanbank 'A' (396,000 kW), Swanbank 'B' (120,000 kW) and Howard (37,500 kW) together with gas turbine stations—Swanbank 'C' (30,000 kW) and Middle Ridge (60,000 kW). The central network is served by power stations at Rockhampton (52,500 kW steam and 25,000 kW gas turbine) and at Callide (120,000 kW). In the northern electricity network the principal power stations are at Townsville (37,500 kW), Kareeya (72,000 kW), Barron Gorge (60,000 kW) and Collinsville (90,000 kW). Most of the power stations in the major eastern supply networks of the State are thermal using coal as their primary energy source. The State's two large hydro-electric power stations are in the Cairns region in North Queensland, at Kareeya (72,000 kW) and Barron Gorge (60,000 kW).

Peak load and emergency gas turbine stations have been built at Rockhampton (25,000 kW) and Swanbank 'C' (30,000 kW) and the State's largest gas turbine station to date, at Middle Ridge near Toowoomba (60,000 kW).

The electrical transmission and distribution systems within the State comprised over 46,000 circuit miles of electric lines at 30 June 1970. The main transmission voltages are 132 kV, 110 kV, 66 kV and in certain areas 33 kV. Work has started on the construction of 275 kV transmission lines in southern Queensland and also between Gladstone and Brisbane, the first time transmission lines of such high voltage have been built in Queensland. The electricity supply industry's extensive rural electrification programme has been continued using the single wire earth return system.

At 30 June 1970 the total number of electricity consumers was 564,848 of whom 219,930 were in the Brisbane metropolitan area.

#### **Future development**

Major development of the State's generating capacity is concentrated on the construction of the following major power stations, at Gladstone (1,100,000 kW) and Swanbank 'B' (480,000 kW), and the construction of extensions to Collinsville, known as Collinsville 'B' (120,000 kW). The first of Swanbank 'B's' four 120,000 kW generating sets was commissioned during 1969-70 and the station is expected to become fully operative in 1973. The Gladstone power station will comprise four 275,000 kW generating sets, the first of which is expected to be commissioned by 1974. The output of these two power stations will help to meet increasing demands for power over the planned southern and central interconnected systems.

In North Queensland the fourth and final 30,000 kW generating set for Collinsville 'A' was commissioned in 1971. This will be followed by a major extension programme, known as Collinsville 'B', which will involve the commissioning of two 60,000 kW sets, and will give Collinsville a total generating capacity of 240,000 kW. The two sets are scheduled for commissioning in 1974 and 1977 respectively.

Investigations are already in hand for the planning of another major power station to follow the Gladstone project, as well as the economic feasibility of further interconnection of the States electricity supply systems.

### South Australia

A general historical survey concerning the electricity supply industry in South Australia is given in Year Book No. 39, page 1186. The survey traces the development of the industry from its formation in South Australia in 1895 until the establishment of the South Australian Electricity Commission in 1943.

#### Electricity Trust of South Australia

In 1946 the assets of the Adelaide Electric Supply Co. Ltd were transferred to a newly formed public authority, the Electricity Trust of South Australia, which became responsible for unification and co-ordination of the major portion of the State's electricity supply and which took over the powers previously vested in the South Australian Electricity Commission. In addition to the powers specified in the Adelaide Electric Supply Company's Acts, 1897-1931, the Trust may supply electricity direct to consumers within a district or municipality with the approval of the local authority, and by agreement with other organisations which generate or supply electricity, arrange to inter-connect the mains of the Trust with those of other organisations, and give or receive supplies of electricity in bulk.

#### Capacity and production

Of the total installed capacity in South Australia at 30 June 1970, the Electricity Trust operated plant with a capacity of 961,000 kW, and is the most important authority supplying electricity in the State. There were approximately 430,000 ultimate consumers of electricity in the State, of whom 418,000 were supplied directly and approximately 6,500 indirectly (i.e. through bulk supply) by the Trust. Its major steam stations are Osborne 'B' (240,000 kW), Port Augusta Playford 'A' (90,000 kW) and Playford 'B' (240,000 kW), and Torrens Island (480,000 kW).

The Trust operates two smaller power stations, the Mt Gambier Station has an installed capacity of 22,000 kW and Pt Lincoln 9,000 kW—both locations are connected with the Trusts interconnected system with 132 kV lines.

The two main fuels used by the Trust are sub-bituminous coal from Leigh Creek for the Port Augusta, Playford Power Stations and natural gas from the Gidgealpa-Moomba field for the Torrens Island Station.

### Western Australia

For information on the early history of electricity supply in the metropolitan area, see Year Book No. 39, page 1189.

#### State Electricity Commission of Western Australia

The State Electricity Commission of Western Australia is empowered to co-ordinate all power undertakings in the State and to encourage and promote the use of electricity and other power. The Commission provides central power station supply through an interconnected grid system to the Metropolitan Area, the South-West and Great Southern areas, and an area extending eastward to Koolyanobbing. Beyond the limits of the interconnected system power is supplied to towns by diesel power stations operated by the Commission, local government authorities, private concessionaires, or mining companies. A scheme known as the Northern Areas State Power Scheme is also being developed. For this scheme the Commission purchases power in bulk to supply districts between Northampton and Dongara and to Perenjori and Morawa.

The total number of consumers at 30 June 1970 was 262,825 of whom 242,613 were supplied by the Commission. The number of consumers on rural holdings supplied by the Commission at 30 June 1970 was 13,581.

The activities of the interconnected system for the year ended 30 June 1970 were as follows: plant capacity, 529,500 kW; units generated, 2,160 million kWh; fuel used per unit (kWh) generated, 1.39 lb; coal used, 1,016,611 tons.

In September 1970 the first 120 mW unit at the new Kwinana thermal generating station was commissioned. Three additional 120 mW units will be installed at the station before 1973 and two 200 mW units are scheduled for installation in 1975 and 1976.

## Tasmania

A considerable part of the water catchment in Tasmania is at high level, with a substantial natural storage available, and this has made it possible to produce energy at a lower cost than elsewhere in Australia, or in most other countries. Another factor contributing to the low cost is that rainfall is distributed fairly evenly throughout the year with comparatively small yearly variations. The abundant and comparatively cheap supplies of electricity and other natural resources have attracted to Tasmania a number of important secondary industries, including large electro-chemical and metallurgical works with high load factor (in consequence of which the system load factor is also very high—70 per cent), for which energy costs constitute a large proportion of the total cost of production. The continuous power demand of these organisations when plant is in full operation aggregates 390,000 kW. For information on hydro-electric development in Tasmania prior to the establishment of the Hydro-Electric Commission in 1930, see Year Book No. 39, pages 1192–3.

### Hydro-Electric Commission

In 1929 the Government passed the *Hydro-Electric Commission Act 1929*, which established the Hydro-Electric Commission and vested in the Commission, with some minor exceptions, the right to use the waters of the State of Tasmania, and authorised it to develop and reticulate electric power for all purposes. In 1930 this corporate body took over the State hydro-electric undertaking and the business of the Hydro-Electric Department.

The total installed capacity of alternators in the various power stations operating now, under construction, or projected is as follows.

<i>Power stations</i>	<i>Water system</i>	<i>Date of entry into system(a)</i>	<i>kW</i>
Tarraleah . . . .	Derwent . . . . .	1938	90,000
Waddamana 'B' . . . .	Great Lake . . . . .	1944	48,000
Butlers Gorge . . . .	Derwent . . . . .	1951	12,200
Tungatinah . . . . .	Nive/Ouse/Little Pine . . . . .	1953	125,000
Trevallyn . . . . .	South Esk(b) . . . . .	1955	80,000
Lake Echo . . . . .	Little Pine/Ouse . . . . .	1956	32,400
Wayatinah . . . . .	Derwent . . . . .	1957	38,250
Liapootah . . . . .	Derwent . . . . .	1960	83,700
Catagunya . . . . .	Derwent . . . . .	1962	48,000
Poatina . . . . .	Great Lake . . . . .	1964	250,000
Tods Corner . . . . .	Arthurs Lake . . . . .	1966	1,600
Meadowbank . . . . .	Derwent . . . . .	1967	40,000
Cluny . . . . .	Derwent . . . . .	1967	17,000
Repulse . . . . .	Derwent . . . . .	1968	28,000
Rowallan . . . . .	Mersey-Forth . . . . .	1968	10,450
Lemonthyme . . . . .	Mersey-Forth . . . . .	1969	51,000
Devils Gate . . . . .	Mersey-Forth . . . . .	1969	60,000
Wilmot . . . . .	Mersey-Forth . . . . .	1970	30,600
Bell Bay Thermal, Stage 1 . . . . .	.. . . .	1970	120,000
Cethana . . . . .	Mersey-Forth . . . . .	1971	85,000
Paloona . . . . .	Mersey-Forth . . . . .	1972	28,000
Fisher . . . . .	Mersey-Forth . . . . .	1972	43,200
Bell Bay Thermal, Stage 2 . . . . .	.. . . .	1974	120,000
Gordon River, Stage 1 . . . . .	Gordon/Serpentine/Huon . . . . .	1975	240,000
Pieman River Scheme . . . . .	Pieman/Hutchison/Mackintosh . . . . .	1978	420,000

(a) Actual till 1970; planned dates for subsequent years. (b) Discharge from Poatina enters South Esk via tributaries.

The number of ultimate consumers at 30 June 1970 was 146,958.

### New capacity

The Hydro-Electric Commission is engaged on a construction programme comprising the Mersey-Forth Power Development, and the Gordon River Power Development, Stage 1.

The Mersey-Forth Power Development is scheduled to be completed by 1972. This development involves diversion of the Mersey and Wilmot Rivers and their tributaries into the Forth River and the construction of seven distinct power stations. The project will add a total of 308,250 kW to the system. The first stage of the Gordon River Power Development involves the construction of a dam



and a power station with a proposed instalment of 240,000 kW capacity with provision for an increase to 320,000 kW. An oil-fired thermal station with a single 120,000 kW generator was completed at Bell Bay on the River Tamar in 1970. The second stage of the station which will double the capacity is expected to be completed by 1974.

The Commission is conducting extensive surveys and investigation of other schemes with a view to further construction after the completion of the present programme. It is estimated that the potential which can be developed economically should ultimately harness 3,000,000 kW to the system.

## Commonwealth Territories

### Australian Capital Territory

The supply authority is the A.C.T. Electricity Authority, which took over the functions of the Canberra Electric Supply Branch, Department of the Interior, on 1 July 1963. Supply was first made available in Canberra during 1915 and was met from local steam plant. Connection to the New South Wales interconnected system was effected in 1929, and all requirements are now taken from this system. Locally owned plant consists of 4,000 kW of diesel alternators which are retained as a standby for essential supplies. The total number of ultimate consumers at 30 June 1970 was 40,901. During the year 1969-70 the bulk electricity purchased was 498,240,000 kWh and the system maximum demand was 131,050 kW.

### Northern Territory

Electricity is supplied in the main population centres of the Northern Territory by the Northern Territory Administration under the provisions of the *Supply of Services Ordinance* 1952-1965 and the Electricity Supply Regulations made pursuant thereto.

A steam turbo-generating station is operated together with an extensive distribution system in Darwin, and diesel generating stations and distribution systems at Alice Springs, Katherine, Pine Creek and Elliot. At Tennant Creek supplies of electricity are purchased in bulk from Peko Mines N.L. and sold to consumers through a distribution system operated by the Northern Territory Administration.

Capacities of generating stations as at 30 June, 1970 were: Darwin 47,500 kW, Alice Springs 8,009 kW, Katherine 5,403 kW, Pine Creek 200 kW, Elliot 90 kW.

The total number of consumers served in the Territory as at 30 June 1970 was 11,075.

### Papua and New Guinea

*Papua and New Guinea Electricity Commission.* Responsibility for the operation and establishment of the electrical undertakings in Papua and New Guinea is vested in the Papua and New Guinea Electricity Commission, whose headquarters are located at Port Moresby. The Commission came into operation on 1 July 1963, and assumed the functions and responsibilities previously vested in the Electrical Undertakings Branch of the Department of Public Works. The Commission, on its own behalf, operates the public supplies in the main centres of population and, on behalf of the Administration, operates the supply in the minor centres and patrol posts, hospitals, agricultural establishments, etc., where the supply cannot be considered to be a fully commercial supply. It has also regulatory functions associated with the licensing of electricians and contractors, the control of franchise holders and the approval of appliances and electrical materials for use in the Territory.

*Generating facilities.* The Electricity Commission owns and operates diesel and hydro-electric facilities at Goroka, hydro-electric facilities at Port Moresby and diesel facilities at Lae, Madang, Samarai, Wewak, Rabaul and Kavieng, with a total installed capacity of 53,832 kW at 30 June 1970. The Kokopo Station was closed when the new transmission line from Rabaul came into operation in May, 1969.

	Hydro kW	Diesel kW	Total kW
Port Moresby . . . . .	35,500	..	35,500
Lae . . . . .	..	5,570	5,570
Madang . . . . .	..	3,620	3,620
Goroka . . . . .	400	1,392	1,792
Wewak . . . . .	..	2,300	2,300
Rabaul . . . . .	..	4,160	4,160
Kavieng . . . . .	..	450	450
Samarai . . . . .	..	440	440
<b>Total . . . . .</b>	<b>35,900</b>	<b>17,932</b>	<b>53,832</b>



In addition, the Commission purchases bulk power from the hydro-electric power stations of Placer Development Ltd for consumption in the township of Lae. The total substation capacity of all the Commission systems combined amounts to approximately 84,775 kVA divided up in 551 stations. The number of consumers served by the Commission at 30 June 1970 was 16,240. The Commission also maintains the generating plant and distribution systems in all minor centres, acting as an agent of, and from funds provided by, the Administration. In the financial year 1969-70, 124 centres with a total installed capacity of approximately 9,807 kW were supplied with power. The townships of Wau and Bulolo are supplied exclusively with power generated by Placer Development Ltd.

Raising of Sirinumu Dam was completed early in 1971. This will ensure adequate water for the full output of Rouna 2 Power Station, and provide potential for further development of the Laloki River Scheme to supply Port Moresby.

The International Bank for Reconstruction and Development has granted a \$20.7 million loan to assist in the development of the first stage of the Upper Ramu Hydro-electric scheme. Initially, the Ramu Scheme will consist of an underground power station with a capacity of 45 mW and will supply the towns of Lae, Madang, Goroka and Mt Hagen, and smaller intermediate centres. The estimated total cost of the project including the installation of 320 miles of transmission lines is \$30.3 million.

*Future Development.* Investigations have been carried out into the construction of a Rouna 3 Power Station adjacent to the existing Rouna 1 plant. The station would be of about 12 mW and would cost about \$4 million. Preliminary investigations have also commenced into the possibility of a Rouna 4 Power Station downstream from Stations 1 and 3. Early plans are to make this a 12 mW station, also at a cost of about \$4 million. Both projects are subject to finance being available.

In Rabaul construction of a new power station away from the town (at Kabaira Bay) is about to start. The completed project will cost \$2.5 million, and the first power is expected to be generated in March 1973.

Looking to the more distant future, the Electricity Commission has marked as 'feasible' hydro-electric schemes on the Purari, Musa, Nebelyer, Luluai, Vanapa and Angabunga rivers, and Lake Hargy in West New Britain.

### Statistical Summary

For a summary of operations of electricity establishments in 1968-69 *see* Chapter 22, Manufacturing Industry, pages 720-1. The information contained therein is not comparable with that contained in previous issues of the Year Book; for an explanation of the differences *see* page 712 of this issue.



## CHAPTER 29

### THE TERRITORIES OF AUSTRALIA

The internal Territories of Australia are the Northern Territory and the Australian Capital Territory. External Territories under the control of Australia are: Norfolk Island; the Territory of Papua (formerly British New Guinea); the Territory of New Guinea (under Trusteeship Agreement with the United Nations); the Territory of Heard and McDonald Islands; the Australian Antarctic Territory; the Territory of Cocos (Keeling) Islands; and the Territory of Christmas Island. There is also the Territory of Ashmore and Cartier Islands, deemed to form part of the Northern Territory.

Information on all except Ashmore and Cartier Islands is contained in the following pages, and details of the acquisition of all the Territories will be found on pages 5, 22, and 23 of Chapter 1. More detailed statistics and additional descriptive matter are to be found in the Annual Reports of the Administrations of the various Territories and in the *Northern Territory Statistical Summary* and the *Australian Capital Territory Statistical Summary* issued by this Bureau. Statistics for the Northern Territory and the Australian Capital Territory are also included in chapters dealing with particular subjects. The Statistician, Territory of Papua and New Guinea, issues a number of publications containing statistics relative to these two Territories, separate and combined.

Responsibility for the general administration of the Territories of Norfolk Island, Papua, New Guinea, Cocos (Keeling) Islands and Christmas Island is vested with the Commonwealth Department of External Territories; for the Northern Territory (including Ashmore and Cartier Islands) and the Australian Capital Territory with the Department of the Interior; and for Antarctica and Heard and McDonald Islands with the Department of Supply. Matters excepted are defence and civil aviation, and, in the Northern Territory and the Australian Capital Territory, public health, justice, education (excluding Aborigines) and the provision of the basic physical services, which are the responsibility of the Department of Health, the Attorney-General's Department, the Department of Education and Science, and the Department of Works, respectively.

### THE NORTHERN TERRITORY

#### General description

##### Area

Upon the extension of New South Wales westwards to the 129th east meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863 it was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1 January 1911. The total area is 520,280 square miles.

##### Legislation and administration

On 1 January 1911 the Territory was transferred from South Australia to the Commonwealth. The terms were outlined in Year Book No. 15, page 940.

The *Northern Territory (Administration) Act 1910-1969* provides for an Administrator, appointed by the Governor-General, to administer the Territory on behalf of the Commonwealth.

It provides for a Legislative Council for the Northern Territory to make ordinances for the peace, order and good government of the Territory. This Council consists of six official members and eleven elected members. A President of the Council is elected from among the elected members. Money votes may be proposed in the Council only upon recommendation by message of the Administrator.

Ordinances are presented to the Administrator for assent. He is obliged to reserve ordinances relating to certain matters, including Crown lands and Aborigines, for the Governor-General's pleasure. Others he may assent to, withhold assent from, or return to the Legislative Council with recommended amendments. The Governor-General may within six months, disallow any ordinance assented to by the Administrator and, in respect of an ordinance reserved for his pleasure, he may assent, withhold assent, withhold assent to part of the ordinance and assent to the remainder, or recommend to the Administrator any amendments to the laws of the Territory that he considers desirable arising out of his consideration of the ordinance.

The Act also provides for an Administrator's Council to advise the Administrator on any matter referred to it, either by the Administrator, or in accordance with the provisions of any ordinance of the Northern Territory. The Council consists of the Administrator, and two official and three elected members of the Legislative Council.

The Territory elects one member to the House of Representatives.

The Corporation of the City of Darwin, established in 1957, consisting of a Mayor and eight Aldermen elected by adult franchise, provides municipal administration in Darwin. Alice Springs was constituted as a municipality on 25 June 1971, and the first election was held on 26 June 1971. The Alice Springs Council consists of a Mayor and eight Aldermen elected by adult franchise and provides municipal administration in that town. Elsewhere in the Territory, municipal services are provided by the Administration. Town Management Boards are established in Katherine and Tennant Creek. Members are appointed by the Administrator and the function of the Boards is to advise the Administrator on local matters.

### Physical geography

The Territory is within the torrid zone, with the exception of a strip about 180 miles wide which lies south of the Tropic of Capricorn.

The low flat coastline seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and laterite form the occasional cliffy headlands. The sea frontage of more than 1,000 miles is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries. The only practicable deep-water port for general use, however, is Darwin.

Inland the country generally is devoid of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the seventeenth or eighteenth parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply for the interior system. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

### Climate, fauna and flora

There are two main climatic divisions, the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly all the rainfall occurs in the summer months. Further particulars appear in Year Book No. 6, Page 1116.

The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous), and frogs abound. There are many varieties of fresh-water fish and littoral *Mollusca*. Butterflies and beetles are strongly represented. The termite is a pest which is capable of serious damage to wooden buildings unless special preventive measures are taken. Mosquitoes and sandflies are very troublesome in the "top end" particularly in the wet season. Most types of native fauna are protected and buffaloes exist in large herds on the northern coastal plains.

The vegetation is north Australian in type but a number of forms belong to the Malayan and Oceanic regions. The climate and generally poor soils associated with it give rise to tropical savannah vegetation, with the size and volume of woody material present being closely related to rainfall and the quality of the forests decreasing strikingly as one proceeds inland from the northern coastline. In the north, cypress pine which is termite resistant, ironwood, bloodwood and paperbark timbers are cut and milled for local building purposes. Further inland particularly on the Barkly Tableland and parts of the Victoria River district there are better grazing grasses and some shrubs, while the wide belt of sandy plain between the Barkly Tableland and the ranges in the Alice Springs area, carries mainly spinifex grass and low scrub. The Alice Springs ranges and uplands carry chiefly a dwarf acacia scrub known as mulga, spinifex and other sparse grasses. The principal orders represented in the interior are *Euphorbiaceae*, *Compositae*, *Convolvulaceae*, *Rubiaceae*, *Goodeniaceae*, *Leguminosae* and *Utricaceae*.

### Population

See also the chapters Population and Vital Statistics.

The estimated population of the Northern Territory at 30 June 1970, including Aborigines, was 38,479 males, 32,904 females, 71,383 persons. The Aboriginal population at the census of 30 June 1966 totalled 10,651 males, 10,468 females, 21,119 persons. While few Aborigines now live outside



settled areas and not all choose to live on reserves, a large area of reserved land totalling 94,196 square miles has been maintained to provide economic resources from which the Aborigines may benefit either directly or from royalty payments.

## Advancement of Aborigines

### Policy

The Commonwealth and State governments have adopted a common policy of assimilation which seeks that all persons of Aboriginal descent will choose to attain a similar manner and standard of living to that of other Australians and live as members of a single Australian community, enjoying the same rights and privileges, accepting the same responsibilities and influenced by the same hopes and loyalties as other Australians.

### Legal status

Under the *Nationality and Citizenship Act* 1948–1966, all Aborigines are British subjects and Australian citizens. Since the commencement of the *Social Welfare Ordinance* 1964 in September 1964, Aborigines in the Northern Territory have been equal at law with all other residents, although some special benefits have been retained for them or have been introduced since then. The Ordinance enables assistance to be given to any person who is socially or economically in need.

### Special schools for Aborigines

While the Department of Education and Science is now responsible for community education in the Northern Territory, special schools and pre-schools for Aboriginal children remain the responsibility of the Welfare Branch of the Administration. These special schools and pre-schools are intended as an interim measure only, policy being that all Aboriginal children should eventually receive their education in the community schools. Following expert inquiries, however, it was decided that schools should be established having a syllabus and school texts which take account of the social and cultural background of the Aborigines. In these schools there is a shift of emphasis from theoretical to practical subjects, but where progress warrants it, the child transfers to the ordinary curriculum leading to the general community schools. A transitional school system has also been established, and one of its main objectives is to provide a bridge between the special schools and the community high schools.

Fifty-seven special schools for Aboriginal children had been established by the middle of 1970. Forty-eight of these were conducted by the Administration, eight by missions and one by the managements of pastoral properties. Government subsidies were provided to the missions and pastoral managements concerned. Twenty-four pre-school centres had also been established. Nineteen of these were conducted by the Administration and five by the missions.

### Assistance to Aborigines

There are very few Aborigines following a fully nomadic way of life and most choose to live at settlements run by the Government or by religious missions on the Aboriginal reserves which cover a total area of 94,196 square miles. Land within reserves is available for leasing only to Aborigines for pastoral and agricultural purposes. Significant mining ventures have been established within reserves at Groote Eylandt and Gove, and mineral and timber royalties received from activities carried on within reserves are paid into the Aborigines Benefits Trust Fund. This Fund was established in 1952 and the Minister for the Interior may authorise loans or grants from the Fund to Aborigines. In this matter the Minister has the advice of a special Committee which includes five Aboriginal representatives. Moneys in the Fund may be used for a wide variety of purposes which would benefit the Aboriginal people, e.g. to establish business enterprises, to provide community facilities such as Council houses and sporting ovals, and to assist people to purchase houses and furniture. Approved disbursements from the Fund totalled \$766,600 at 30 June 1971.

An intensive welfare programme to prepare Aborigines for the demands of modern living is being carried out, and twenty Government settlements or welfare centres and thirteen mission stations have been established where Aborigines are assisted to acquire new employment skills and the women receive instruction on home management, etc. Health services (including infant clinics), education, housing, vocational training and employment are provided, and Aborigines are encouraged to take part in the social activities of the community.

Financial and technical assistance is available to Aborigines who wish to develop their own commercial or industrial enterprises. In addition to the Aborigines Benefits Trust Fund, financial assistance is also available from the Capital Fund for Aboriginal Enterprises controlled by the Minister for the Environment, Aborigines and the Arts.

### Consultation with Aborigines

An Aboriginal Advisory Council of eleven Aborigines, each representing a district of the Northern Territory, was established in early 1971 to advise the Minister for the Interior on Aboriginal issues in the Territory.

### Production

*See also* the chapters dealing with particular subjects.

### Land tenure

Nearly 60 per cent of the total area of land in the Territory is held under various forms of lease or licence which are described in Year Book No. 48, pages 111-12. The remainder comprises unoccupied and unreserved areas (22.1 per cent), reserved (18.7 per cent) and freehold (0.1 per cent). The following changes should be noted.

*Leases to Mission Organisations* are now granted under the *Special Purpose Leases Ordinance* 1953-1965 for fixed terms or in perpetuity.

*Miscellaneous Leases* are now granted in perpetuity for purposes such as a market garden, plantation, orchard, vineyard, poultry farm, piggery, or the like.

*Darwin Town Area Leases* are granted in perpetuity for business or residential purposes, or both, in the Darwin Town Area.

*Pastoral Homestead Leases*—provisions relating to the granting of these leases have been repealed.

*Agricultural Leases* are granted in perpetuity; the farm classifications no longer apply and the maximum area now which may be included in any one agricultural lease is fifty thousand acres and a person cannot hold agricultural land in excess of one hundred thousand acres except that these figures may be increased to 100,000 acres and 200,000 acres respectively by the Administrator on the recommendation of the Land Board.

*Special Purposes Leases* are now granted for a term of years or in perpetuity.

*Leases to Aborigines*—leases lying within Aboriginal reserves are now granted to Aborigines.

Legislation providing for new land tenure arrangements in the Darwin municipal area commenced on 1 January 1971. Under these arrangements land rent has in effect been abolished and a reserve price scheme introduced for new leases. The reserve price scheme enables the Commonwealth to recover development costs. Lessees may now, after compliance with lease covenants, convert to freehold on payment of an administrative fee.

Legislation has been passed to extend these arrangements to the whole of the Darwin Town Area and to municipalities other than Darwin.

The chapter Rural Industry of this issue contains statistical information concerning areas occupied under various forms of tenure.

### Agriculture

Commercial agricultural production is confined to grain sorghum, vegetables and small-scale fruit production for local consumption. Townsville stylo seed production has increased considerably and has become an important contributor to the income of many small landholders.

Information concerning scientific surveys (commenced in 1946), conducted by the Commonwealth Scientific and Industrial Research Organization to determine more accurately the potentialities of the Northern Territory, and the resulting establishment of an agricultural research station at Katherine and experimental farms at Katherine and Berrimah (near Darwin), is given in Year Book No. 51, page 101, and in earlier issues. Information is given also on the establishment of rice research stations and investigational work carried out, and on subsequent rice crop commercial scale operations. The appointment by the Minister for Territories in 1959 of an expert committee to carry out investigations relative to the prospect of agriculture in the Territory and subsequent developments are also referred to.

**NORTHERN TERRITORY: AREA AND PRODUCTION OF CROPS**  
1965-66 TO 1969-70

<i>Crop</i>	1965-66	1966-67	1967-68	1968-69	1969-70
<b>AREA(a)</b> (acres)					
Fruit—Bananas . . . . .	20	29	(b)	(b)	11
Pineapples . . . . .	12	17	(b)	(b)	10
Other . . . . .	78	87	98	90	87
<i>Total fruit</i> . . . . .	110	133	98	90	108
Peanuts . . . . .	16	(b)	12	(b)	(b)
Sorghum for grain . . . . .	1,093	527	(c)	(c)	(c)
Vegetables for human consumption . . . . .	144	218	199	255	277
Other crops(d) . . . . .	2,699	2,747	5,691	6,834	7,170
<b>Grand total(a)</b> . . . . .	<b>4,062</b>	<b>3,625</b>	<b>6,000</b>	<b>7,179</b>	<b>7,561</b>
<b>PRODUCTION</b>					
Fruit—Bananas . . . . . bushels	1,985	1,684	(e)	(e)	(e)
Pineapples . . . . . "	990	997	(e)	(e)	(e)
Peanuts . . . . . cwt	76	(e)	32	(e)	(e)
Sorghum (grain) . . . . . bushels	12,018	7,533	(e)	(e)	(e)

(a) Excludes rice; details are not available for publication. (b) Not available for publication, included in Other crops. (c) Not available for publication, excluded from totals. (d) Principally fodder crops. (e) Not available for publication.

**Pastoral industry**

The pastoral possibilities of certain parts of the Territory were recognised at an early date, and both cattle and sheep raising have been attempted. For various reasons sheep-raising has not been very successful, but the cattle industry has progressed steadily and is continuing to expand. There is substantial potential for further expansion in the higher rainfall area of the Territory through the introduction of improved pastures and the use of superphosphate.

**NORTHERN TERRITORY: LIVESTOCK, 1966 TO 1970**  
(‘000)

<i>30 June—</i>	<i>Horses</i>	<i>Cattle</i>	<i>Sheep</i>	<i>Pigs</i>
1966 . . . . .	37	1,032	9	2
1967 . . . . .	38	1,097	8	3
1968 . . . . .	38	1,130	9	2
1969 . . . . .	39	(a)1,190	10	(a)2
1970(a) . . . . .	41	1,179	8	4

(a) At 31 March.

**Mining**

During the 1969-70 financial year the value of output of the mining and quarrying industry in the Territory was \$38,637,000. The mining industry is now the Territory's biggest industry and the greatest export earner. The main minerals produced were manganese, copper, iron ore, gold and bismuth.

The Northern Territory's present major mining developments are at Tennant Creek, Groote Eylandt, Gove and Frances Creek.

Most of the copper and gold produced in the Territory is obtained from underground mines in the Tennant Creek district. A new mine at Warrego (36 miles to the north west of Tennant Creek) and an ore treatment concentrator will commence production at the end of 1972. Export earnings of from \$40 to \$50 million over about eight years are expected from the mine's known reserves.



Another new copper-gold mine at Gecko is expected to commence operations by June 1972. Peko Mines N.L., the company developing these projects at Tennant Creek, is also proposing to establish a flash smelter to produce blister copper.

Manganese ore is being produced by open cut methods from extensive deposits at Groote Eylandt in the Gulf of Carpentaria. Production capacity has been increased since the commencement of operations in 1966 and should reach about 1.2 million tons per annum by late 1971 rising to about 1.6 million tons per annum by late 1972 or early 1973. Groote Eylandt supplies all Australia's requirements of metallurgical grade manganese ore and large tonnages are exported to Japan, Europe and the U.S.A. Total shipments of ore in 1969-70 amounted to 625,265 tons valued at \$10.8 million.

Production of iron ore at Frances Creek commenced in 1966 and at Mount Bundey in 1967. The output from these mines is being exported to Japan. All ore from both mines is shipped through Darwin and in 1969-70 totalled 1,112,875 tons valued at \$10.3 million.

A bauxite mining and treatment project based on extensive bauxite deposits is being developed at Gove at a cost of \$310 million. Under an agreement between the Commonwealth and Nabalco Pty Ltd, ratified by Ordinance passed by the Northern Territory Legislative Council in 1968, Nabalco undertook to develop the deposits. Under the terms of a supplemental agreement, signed in 1969, the equity capital of the project is held as to 70 per cent by Swiss Aluminium Australia Pty Ltd and as to 30 per cent by Gove Alumina Ltd (a consortium of seven Australian companies). An alumina plant is being built in two stages. The first stage with a capacity of 500,000 tons per year will be completed in July 1972 and the second stage, increasing the annual capacity to 1 million tons, by July 1973. The agreement permits exports of 40 million tons of untreated bauxite over 20 years. Export of bauxite commenced in June 1971.

The production of uranium oxide in the Rum Jungle area ceased in April 1971, when the processing of the ore stockpile was completed.

In July 1970 the selection was announced of successful applicants for specified prospecting areas within a 1,700 square mile area previously reserved from mining south of Darwin, including a section of the Rum Jungle area. In the same general area are the Woodcutters lead/zinc prospect and a low to medium grade lead orebody known as Brown's deposit. The feasibility of developing these deposits is under close examination.

Investigations are continuing into possible methods of treating the extensive lead-zinc deposits located in the McArthur River district. Conventional metallurgical processes are not considered suitable for the treatment of these ores.

In July 1970, discoveries of uranium deposits at Nabarlek and Ranger 1 in the East Alligator River area of Arnhem Land were announced. In June 1971 the existence of a further large deposit at Jim Jim in the same general area was confirmed. These discoveries, some 150 miles east of Darwin, are considered to be part of a uranium province of potentially world importance and aerial surveys have indicated further anomalies which could reveal further deposits of commercial importance.

Total expenditure on petroleum exploration in the Northern Territory during 1969 was about \$9.8 million. The principal area of interest for petroleum exploration has in the past been the Amadeus Basin in the south of the Territory. More recently the off-shore areas in the Bonaparte Gulf Basin and the Arafura Sea have drawn considerable attention. Drilling of the Petrel No. 1 well in 1969 in the Bonaparte Gulf resulted in the discovery of what could be a major field of natural gas. On-shore evaluations of the Mereenie oil and gas field have indicated reserves of 300 million barrels of oil and 1 U.S. trillion cubic feet of gas. The recovery of the oil presents some difficulties but the feasibility of establishing a small refinery at Alice Springs is being examined by the exploration companies and the Government. An important natural gas find at Palm Valley 70 miles west of Alice Springs, has been confirmed and indications are that a major field exists.

#### NORTHERN TERRITORY: MINING AND QUARRYING OPERATIONS, 1965 TO 1968

(Excluding uranium mining)

	1965	1966	1967	1968
Number of mines and quarries . . . . .	67	80	74	58
Average number of persons employed during whole year (including working proprietors) . . . . .	688	814	1,006	1,132
Salaries and wages paid(a)(b) . . . . . \$'000	2,867	3,361	4,609	5,707
Total fuel, materials, etc., used . . . . . "	2,571	2,212	2,901	4,211
Value of additions and replacements to fixed assets(a) . . . . . "	5,677	7,282	5,195	7,756
Value of output (at mine or quarry) . . . . . "	8,289	13,283	19,316	23,446
Value of production(c) . . . . . "	5,715	11,070	16,416	19,235

(a) Excludes mines employing less than four persons. (b) Excludes drawings by working proprietors; the amounts are net after deducting value of explosives sold to employees. (c) Value of output less cost of power, fuel and light and other materials and stores used; depreciation and maintenance costs have not been deducted.



The following table shows preliminary results of the Mining Census taken in respect of the year ended 30 June 1969.

### NORTHERN TERRITORY: MINING ESTABLISHMENTS, 1968-69

NOTE. Direct comparisons with figures for previous years are not possible because of change in the census units, the scope of the census and the items of data. For details see Chapter 27, Mineral Industry.

Establishments operating during 1968-69	No.	21
Persons employed(a)	No.	1,048
Wages and salaries	\$m	5.4
Sales, transfers out and other operating revenue	\$m	35.3
Stocks at 30 June—1968	\$m	4.4
1969	\$m	5.1
Purchases, transfers in and selected expenses	\$m	14.9
Value added(b)	\$m	21.1

(a) At end of June 1969. Includes working proprietors.  
 (b) Sales, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

### Forestry

A programme of forest improvement and development to conserve existing forest areas and increase timber resources is undertaken by the Forestry Branch of the Northern Territory Administration. Basic forestry research is carried out by the Forestry and Timber Bureau at a Regional Research Station established at Berrimah. The Territory forestry programme includes the regeneration and utilisation of native forests, the establishment of 1,000 acres of softwood plantations (mainly native cypress pine) per year and makes provision for the employment and training of Aborigines in forestry work. Local production of log timber, mainly cypress pine, amounted to 1,322,000 super feet in 1969-70 but this was insufficient to meet local needs and some 6,922,000 super feet of sawn timber was imported from interstate and overseas.

### Fisheries

Following preliminary surveys indicating the existence of valuable prawn resources off the Northern Territory coast, approval was given in 1968 for seven companies to begin prawning operations. A condition of this approval is that shore processing plants must be established by the companies. Three of these companies are joint Australian-Japanese ventures involving the use of foreign vessels and crews for a limited period. The joint ventures are required to establish their processing plants in Darwin; one of these plants commenced operations at the beginning of the 1970 season. Two of the four Australian companies are operating processing plants, one at Darwin and one at Groote Eylandt. During a limited establishment period the Australian companies based outside Darwin have been given protection against the establishment of additional processing plants in the areas in which they have elected to operate. Provision has also been made for participation of Aborigines in the industry. During 1970, the first full season of prawning operations, prawns valued at \$5.2 million were exported from the Territory.

The other main fishery in the Territory is that based on barramundi. In addition a small cultured pearl industry has been established.

### NORTHERN TERRITORY: FISHING(a) 1965-66 TO 1969-70

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>Prawning—</b>					
Estimated gross weight of prawn catch	'000 lb	1	1	23	8,682
Gross value of prawns	\$'000	1	1	14	3,646
<b>Other fisheries—</b>					
Estimated landed weight of fish catch	'000 lb	346	550	555	253
Gross value of fish	\$'000	57	73	96	51
<b>All fisheries—</b>					
Number of boats engaged		43	60	53	82
Number of men employed		120	133	123	437

(a) Excluding pearl shell fisheries and pearling.

**Secondary industries**

The secondary industries that have so far been established in the Territory have been largely the service industries normally associated with a developing area, such as electrical repairs, printing, motor and marine engineering, plumbing, welding, joinery, sheet metal work, and blue metal crushing. Industrial investments by private interests in recent years include plants to manufacture bitumen, clay bricks, concrete bricks, reinforcing steel, concrete products and fencing materials.

**NORTHERN TERRITORY: FACTORIES, 1963-64 TO 1967-68**

	1963-64	1964-65	1965-66	1966-67	1967-68
Number of factories(a) . . . . .	139	174	185	187	188
Average number employed(b)—					
Males . . . . .	978	1,098	1,182	1,308	1,380
Females . . . . .	97	112	112	115	139
<i>Persons employed</i> . . . . .	1,075	1,210	1,294	1,423	1,519
Salaries and wages paid(c)—					
Males . . . . . \$'000	2,628	3,298	3,666	4,146	4,721
Females . . . . . „	142	185	192	203	263
<i>Total salaries and wages paid</i> . . . . . „	2,770	3,483	3,859	4,349	4,983
Value of power, fuel, light, etc. used(d) „	735	865	856	946	1,159
Value of materials used(e) . . . . . „	3,384	4,550	5,497	7,214	7,995
Value of production(f) . . . . . „	4,938	6,654	7,103	7,847	9,680
Value of output(g) . . . . . „	9,057	12,068	13,456	16,007	18,831
Value of land and buildings(h) . . . . . „	4,586	5,668	6,101	6,482	8,150
Value of plant and machinery(h) . . . . . „	6,046	6,103	5,954	6,825	6,696

(a) Any factory, workshop or mill in which four or more persons are employed or power other than hand is used. (b) The aggregate of the average number of persons employed in each factory. Includes working proprietors. Figures represent average employment over the whole year. (c) Excludes drawings by working proprietors. (d) Includes water and lubricating oil. (e) Includes also containers, etc., tools replaced and repairs to plant. (f) Value added in process of manufacture (i.e. value of output less value of materials and fuel used). (g) Value of goods produced including amounts received for repair work and other work done. (h) Depreciated or book value at end of year, including estimated value of rented premises and machinery.

The following table shows preliminary results of the Manufacturing Census taken in respect of the year ended 30 June 1969.

**NORTHERN TERRITORY: MANUFACTURING ESTABLISHMENTS, 1968-69**

NOTE. Direct comparisons with figures for previous years are not possible because of change in the census units, the scope of the census and the items of data. For details see Chapter 22 Manufacturing Industry.

Establishments operating during 1968-69 . . . . .	No.	75
Persons employed(a) . . . . .	No.	1,155
Wages and salaries . . . . .	\$m	4.1
Sales, transfers out and other operating revenue . . . . .	\$m	22.8
Stocks at 30 June—1968 . . . . .	\$m	2.0
1969 . . . . .	\$m	2.4
Purchases, transfers in and selected expenses . . . . .	\$m	13.7
Value added(b) . . . . .	\$m	9.4

(a) At end of June 1969. Includes working proprietors. (b) Sales, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

**Tourism**

Tourism has become one of the Territory's major industries in recent years. There were more than 70,000 visitors to the Northern Territory in 1969-70. The industry is estimated to be worth \$19 million a year and is expanding at a rate around 12 per cent per annum.

A firm of consultants has reported on the tourism potential of Central Australia, and in particular the Ayers Rock-Mount Olga National Park. Their findings have been published in the reports *Tourism Plan for Central Australia* and *Ayers Rock-Mount Olga National Park Development Plan*. The reports provide useful guidelines for the formulation of tourism development programmes for the Centre.

### National Parks and Reserves

Large areas in the Territory have been set aside as wildlife sanctuaries under the provisions of the Wildlife Conservation and Control Ordinance. They cover about 18,000 square miles and are controlled by the Chief Inspector of Wildlife in the Northern Territory Administration. A further 92,704 square miles of Aboriginal reserves are also wildlife protected areas.

There are some thirty-two national parks and reserves totalling about 940 square miles which are administered by the Northern Territory Reserves Board. The Board is responsible for the care, control and management of these reserves, and its functions include preservation and protection of natural and historical features, and the encouragement of public use and enjoyment of land set aside in such reserves.

## Trade, transport and communication

### Trade

No comprehensive record is kept of the trade between the States and the Territory. The following table shows the values of the principal commodities imported into and exported from the Northern Territory from or to overseas countries during the years 1965-66 to 1969-70.

**NORTHERN TERRITORY: PRINCIPAL OVERSEAS  
IMPORTS AND EXPORTS, 1965-66 TO 1969-70**  
(\$'000)

Commodity	1965-66	1966-67	1967-68	1968-69	1969-70
<b>IMPORTS</b>					
Petroleum and shale spirit—					
Aviation spirit . . . . .	158	277	216	234	231
Other (motor spirit) . . . . .	456	542	587	577	706
Aviation turbine fuel . . . . .	955	615	1,099	1,513	1,093
Other oil(a) . . . . .	838	781	1,112	1,757	2,516
Sulphur . . . . .	..	70	486	168	..
Portland cement . . . . .	410	311	370	650	741
Timber (undressed hardwood) . . . . .	334	183	206	380	548
Iron and steel manufactures . . . . .	832	3	1,195	893	1,172
Machinery and transport equipment . . . . .	922	3,914	2,376	10,886	(b) 23,534
Other articles . . . . .	691	690	1,760	4,742	9,288
<b>Total imports</b> . . . . .	<b>5,596</b>	<b>7,386</b>	<b>9,407</b>	<b>21,800</b>	<b>39,829</b>
<b>EXPORTS(c)</b>					
Meats . . . . .	3,348	3,422	4,864	4,794	4,807
Hides and skins, raw . . . . .	61	227	135	209	269
Iron ore and concentrates . . . . .	..	..	3,053	6,467	9,124
Non-ferrous ores and concentrates . . . . .	173	2,682	4,474	8,540	9,091
Copper ores and concentrates . . . . .	2,044	1,512	775	..	116
Pearls . . . . .	179	34	39	8	29
Other articles . . . . .	593	1,091	4,515	8,916	(b) 26,289
<b>Total exports</b> . . . . .	<b>6,398</b>	<b>8,968</b>	<b>17,855</b>	<b>28,934</b>	<b>49,725</b>

(a) Includes kerosene, gas, oil, diesel oil, residual oil, etc. (b) Includes value of oil search equipment (floating structures, etc.) which were brought to the Northern Territory for temporary operation and moved overseas after the planned exploration activities were completed. (c) Includes domestic exports and re-exports.

### Shipping

Shipping services to Darwin are provided from the eastern States by the Australian National Line and from the west by the Western Australia State Shipping Service. Increasing numbers of oil tankers and overseas general cargo vessels visit Darwin while iron ore carriers continue to load lump and fine ore for Japan. The establishment of a prawning industry has resulted in an increasing number of prawning vessels entering the port. Activity is also increasing as a result of visits by oil rig tenders.



John Burke Pty Ltd operates a subsidised shipping service from Brisbane to the Gulf of Carpentaria ports and serves Aboriginal Missions and Settlements as well as the mining centres of Gove and Groote Eylandt, Gove is also served by Australian Territory Liner services. The export of bauxite from Gove has not yet commenced. Other shipping services to Groote Eylandt are in connection with the export of manganese ore.

Mission and privately owned boats and barges also provide services from Darwin to Aboriginal communities and ports along the coast.

The Australian National Line in July 1970 replaced its vessels calling at Darwin with a new container bulk ore vessel, the *Darwin Trader*, which carries general cargo to Darwin and backloads manganese ore from Groote Eylandt to Tasmania.

Developments approved for the port of Darwin will improve the capacity of the port to handle an expected increase in shipping.

#### **Air services**

At 30 June 1970 there were 124 aerodromes in the Territory, ten of which are maintained by the Commonwealth Department of Civil Aviation. The overseas passenger services using the Darwin international airport are Lufthansa (Sydney to Frankfurt); Qantas/B.O.A.C. (Sydney to London); B.O.A.C. (Sydney to Hong Kong); Union de Transports Aeriens (Paris to Los Angeles via Noumea); and T.A.A. on behalf of Transportes Aereos de Timor (Darwin to Baucau). Regular internal services to Darwin, with, in some cases, intermediate stops at Territory centres, are operated by Trans-Australia Airlines and Ansett Airlines (from Adelaide, Melbourne, Sydney and Brisbane), and MacRobertson-Miller Airways Ltd (from Perth and Derby), MacRobertson-Miller Airways Ltd and Connellan Airways Ltd operate a network of air services throughout the Territory, the latter company's base being at Alice Springs. The Royal Flying Doctor Service also operates aircraft, while charter services can be secured at Darwin and Alice Springs.

#### **Railways**

The Commonwealth Railways Commissioner operates the Central Australia Railway from Port Augusta in South Australia to Alice Springs over a distance of 822 miles, of which about 200 are in the Northern Territory. The line is standard gauge from Port Augusta to Marree, a distance of 217 miles, and 3 ft 6 in from Marree to Alice Springs. The Commonwealth Government has approved in principle the construction of standard gauge line between Tarcoola and Alice Springs to replace the Marree-Alice Springs section of the Central Australia Railway. The Commissioner also operates the North Australia Railway between Darwin and Birdum on a 3 ft 6 in gauge over a distance of 317 miles. The two inland terminals, Alice Springs and Birdum, are about 630 miles apart and are connected by road transport along the Stuart Highway. Larrimah, on the highway and 6 miles north of Birdum, is the point of trans-shipment for passengers and goods and is, at present, the effective terminal. A road-rail freight service operates between Adelaide and Darwin via Alice Springs.

#### **Roads**

The Stuart Highway, 954 miles long, connects Alice Springs with Darwin and runs via Katherine and Tennant Creek. The Barkly Highway, 403 miles long, connects Mount Isa (Queensland) with Tennant Creek and joins the Stuart Highway some 16 miles north of Tennant Creek. These highways are used for carrying various freights, including cattle, particularly to and from the railheads at Alice Springs, Larrimah and Mount Isa. The routes are used also for overland tourists and travellers from the southern States to Darwin. There are now approximately 12,000 miles of roads in the Territory of which 2,320 miles are sealed.

Work on a programme for reconstruction and development of beef cattle roads was commenced in 1961-62. To June 1970 \$30.2 million has been authorised for the improvement of 1,600 miles including the sealing of 950 miles. Expenditure to 30 June 1970 was \$23.5 million. The transport of cattle by road is expected to increase the number, quality and value of cattle turned off.

#### **Posts, telegraph, telephones and wireless**

Postal communication is maintained by road, rail and air transport between Darwin and the capital cities of Australia. In addition, vessels belonging to the Western Australian State Shipping Service provide a regular service between Fremantle and Darwin. Inland, the northern part of the Territory receives its mail via Darwin or by means of the aerial services, and the southern districts are served via Adelaide.

The overland telegraph line, covering 2,230 miles, runs from Adelaide to Darwin and links Darwin in telegraphic communication with other parts of the world. Trunk telephone lines extend



from Adelaide and Townsville to Darwin, providing telephone communication with the capital cities of Australia. These lines also carry interstate telegram and telex traffic and serve the towns along the routes.

Darwin is connected by high frequency radio to Gove Peninsula and to Groote Eylandt. In addition high frequency radio telephone exchanges have been established at Alice Springs and Katherine which provide connections to the telephone network for pastoral, mining, tourist and other organisations throughout the Northern Territory and across the borders into Queensland, South Australia and Western Australia. The majority of homesteads on pastoral leases are equipped with radio transceivers operated under licence from the Postmaster-General's Department.

Regional national broadcasting stations are situated at Darwin, Alice Springs, Tennant Creek and Katherine and there is a commercial station at Darwin.

## Education

*See also* the chapter Education, Cultural Activities and Research.

### Community schools

Since February 1968 the Commonwealth Minister for Education and Science has been responsible for community education in the Northern Territory. Community schools are operated by the Commonwealth under an agreement with the South Australian Department of Education which has until recently provided all teachers and curricula.

In July 1970 the South Australian Education Department announced that it had decided upon a planned withdrawal of South Australian teachers from the Northern Territory over a five year period. As a result of this withdrawal seventy teachers of the total 534 teachers employed, formed the nucleus of the first Commonwealth Teaching Service. At 1 August, 1971, there were 33 government schools in the Territory, with 10,810 pupils, and 5 non-government schools with 1,393 pupils, providing instruction according to the South Australian curriculum. High schools have been established with classes to matriculation level at Darwin and the leaving certificate level at Alice Springs and Nightcliff. Area schools provided classes up to fourth year high school level at Katherine and Nhulunbuy (fourth year by correspondence), and to third year high school level at Tennant Creek, Batchelor and Alyangula.

Special boarding-away-from-home allowances, correspondence supervision allowances and conveyance allowances are paid to school-age students in the Northern Territory. In addition, limited numbers of special Northern Territory secondary and tertiary scholarships supplement normal Commonwealth scholarship provisions. For details of these special allowances *see* Year Book No. 56, age 974.

At 30 June 1971 there were nineteen government pre-school centres (including two play groups) in the Territory, with an enrolment of 1,020 pupils. A number of scholarships are offered each year for the training of pre-school teachers.

### Theoretical training for apprentices

The recognition that technical school training is an extension of workshop training has led to the introduction of day-time classes which apprentices attend without loss of pay. Full trade courses are provided in the more popular trades in Darwin; correspondence courses are arranged for apprentices outside Darwin and for those in Darwin following the less popular trades.

## Finance

Details of receipts and expenditure of the Territory for the years 1965-66 to 1969-70 are shown in the table following. In this table the receipts and expenditure of the Northern Territory have been classified into a National Accounts form. The table covers transactions relating to the Northern Territory in the Commonwealth Consolidated Revenue Fund and the following trust funds; Northern Territory Aborigines Benefits, Northern Territory Government Settlements Canteens, Northern Territory Housing Commission, Northern Territory Housing Loans, and Northern Territory Transport. (Details of the financial transactions of the following Northern Territory semi-government authorities are also included: the Northern Territory Port Authority; Northern Territory Aboriginal Advancement Capital Fund (from 1968-69) and the Northern Territory Housing Commission (from 1969-70). Details of the financial transactions of the Darwin City Council are also incorporated in the table. Revenue derived by the Commonwealth from income taxes, customs duties, etc. levied in the Northern Territory and expenditure by the Commonwealth in the Northern Territory on such items as defence, civil aviation, railways, etc., and payments to residents from the National Welfare Fund are not included.

## NORTHERN TERRITORY: RECEIPTS AND EXPENDITURE, 1965-66 TO 1969-70

(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
RECEIPTS					
Taxation—					
Stamp duties . . . . .	53	55	73	86	94
Motor registration . . . . .	237	273	321	517	586
Other . . . . .	370	520	590	691	835
Interest, rent, etc. . . . .	357	309	456	490	547
Public enterprises income . . . . .	1,700	1,776	2,173	2,409	2,658
Net sale of local and semi-government securities . . . . .	227	..	-393	90	..
Other receipts—					
Net charge to Commonwealth budget . . . . .	39,008	50,698	53,159	57,490	72,274
Other(a) . . . . .	-210	382	646	658	-1,543
<b>Total receipts . . . . .</b>	<b>41,742</b>	<b>54,011</b>	<b>57,026</b>	<b>62,431</b>	<b>75,451</b>
EXPENDITURE					
Net current expenditure on goods and services—					
Law, order and public safety . . . . .	296	328	426	440	422
Education . . . . .	1,472	1,641	2,141	2,822	3,547
Public health and welfare . . . . .	6,492	7,748	9,330	11,053	14,414
Other . . . . .	10,614	12,524	14,063	16,131	17,929
Capital expenditure on new assets and stocks—					
Roads . . . . .	4,514	4,727	7,187	7,911	8,068
Housing . . . . .	4,658	4,407	3,925	3,678	6,193
Other . . . . .	11,914	20,554	17,390	17,526	19,594
Net purchase of existing assets(b) . . . . .	-17	205	-997	-460	2,883
Cash benefits . . . . .	300	316	369	450	498
Subsidies . . . . .	539	298	311	337	648
Interest paid . . . . .	253	145	81	67	180
Net advances—					
Housing . . . . .	294	567	2,191	1,957	809
Other . . . . .	408	544	603	512	234
Grants towards Private Capital Expenditure . . . . .	5	7	6	7	32
<b>Total expenditure . . . . .</b>	<b>41,742</b>	<b>54,011</b>	<b>57,026</b>	<b>62,431</b>	<b>75,451</b>

(a) Includes movements in cash, investments, etc. (b) Minus sign (-) denotes excess of receipts (from sales) over expenditure on, or purchases of, existing assets, including housing.

## THE AUSTRALIAN CAPITAL TERRITORY

## General description

The Commonwealth Constitution provides that the Seat of Government of the Commonwealth shall be in the State of New South Wales but distant not less than 100 miles from Sydney. After a number of alternative sites were considered, an area of 911 square miles lying approximately 200 miles south-west of Sydney was transferred to the Commonwealth as from 1 January 1911. A further 28 square miles at Jervis Bay were transferred as from 4 September 1915 to serve as a port for the Territory.

The primary responsibility for administering the Australian Capital Territory lies with the Department of the Interior, whose functions include housing, police, and municipal services. Education, public health, justice and the provision of basic physical services, including water supply, sewerage and roads, are the responsibility of the Departments of Education and Science, Health, Attorney-General's, and Works. The National Capital Development Commission has the responsibility for the planning and development of the Canberra city area.

The Australian Capital Territory Advisory Council was established in 1930. It has eight elected members and a representative from each of the Departments of Interior, Works, and Health, and the National Capital Development Commission, as well as an observer from the Department of Education and Science. The Council advises the Minister for the Interior on matters affecting the Australian Capital Territory. Ordinances are submitted in draft form to the Council for advice and comment before being implemented.

At the census of 30 June 1966 the population of the Australian Capital Territory was 96,013, made up of 92,308 in the Canberra metropolitan area and 3,705 in rural areas (including Jervis Bay). The estimated population of the Territory at 30 June 1970 was 68,704 males and 64,346 females, 133,050 persons. *See also* the chapters Population and Vital Statistics.

### National Capital Development Commission

*The National Capital Development Commission Act 1957-60* provides for a Commission to undertake and carry out the planning, development and construction of the City of Canberra as the National Capital of the Commonwealth. The year 1969-70 was the twelfth year of the Commission's operations. Construction work was carried out by means of agency arrangements with the Commonwealth Department of Works and private consultants. Details of the expenditure by the Commission in each year from 1965-66 to 1969-70 are included in the table on page 980. Total expenditure in 1969-70 was \$50.1m, comprising land development and services \$9.3m, water, sewerage and stormwater trunk services and headworks \$3.8m, housing, flats and other accommodation, \$7.9m, education facilities \$6.0m, roads, bridges and traffic control \$5.2m, city works and facilities \$3.8m, Commonwealth offices \$8.7m, national works \$2.6m, and others \$2.8m.

The following major works were completed during the 1969-70 financial year by the Commission: Lyneham Primary School Restoration; Scullin Primary School; Woden Valley High School Extensions; Captain Cook Memorial Jet; Woden Town Centre—Roadworks and Engineering Services; Weston Creek Trunk Sewer; Canberra Showground Pavilion.

Works under construction at the beginning of the 1970-71 financial year included the following projects: Belconnen High School, Weston Creek Primary School; Higgins Primary School, Kingston Transport Depot Extensions; Phillip Swimming Centre; Woden Police Station; Fyshwick Retail Fruit and Vegetable Market; Belconnen Reservoirs No. 3 and 4; Bendora-Mount Stromlo Gravity Main Extensions; Campbell Reservoir; Capital Hill Ring Road; Barton Highway Reconstruction; Northbourne Avenue Duplication; Belconnen Way Duplication; Campbell Park Offices; Civic Offices Extension; C.S.I.R.O. Headquarters Building, Campbell; Russell Buildings Nos 10, 11 and 14.

### Works and services

#### Housing

Until the period following the 1939-45 War most houses and flats in the Australian Capital Territory were built and rented by the Department of the Interior. More recently, an increasing number of houses and flats have been built by private enterprise, and as a result the proportion of houses and flats in the Australian Capital Territory occupied by tenants of the Department of the Interior has fallen from 79.7 per cent of total occupied houses and flats in 1954 to 58.3 per cent in 1961 and 38.8 per cent in 1966. Although the bulk of rented accommodation is provided by public authorities and will continue thus in the foreseeable future, there has been a considerable increase in the proportion of home ownership in the Australian Capital Territory, since 1954. The proportion of houses and flats owned or being purchased by instalments has risen from 19.5 per cent in 1954 to 29.0 per cent in 1961 and 45.6 per cent in 1966. In June 1966, 38.6 per cent of the total occupied private dwellings in the Canberra City District were owned by the Department of the Interior, and in June 1969, 33.3 per cent. Home building activity in the Woden Valley and Weston Creek, south-west of the former city area and Belconnen, north-west of the former city area, has continued to expand, and at June 1969 there were 7,396 occupied private dwellings in the Woden Valley and Weston Creek area, and 2,264 occupied private dwellings in the Belconnen area. *See also* the chapter Housing and Building.

#### Municipal services

Canberra has been developed as a garden city. More than eleven million trees and many acres of lawns have been planted since 1927. The development of new areas of parkland and the maintenance of existing tree and lawn areas is the responsibility of the Parks and Gardens Branch of the Department of the Interior. Municipal services are also provided by the Department of the Interior.



At 30 June 1970, 34,021 meters were connected to the city water supply, drawn through eighteen service reservoirs from three storages on the Cotter River with a total capacity of nearly 20,000 million gallons. In 1969–70 some 5,429 million gallons of water were consumed in Canberra, and in addition the system supplied 381 million gallons to Queanbeyan, New South Wales. Treatment works at Weston Creek, Belconnen and Fyshwick dispose of Canberra's sewage. At 30 June 1970, 689 miles of sewers, 9 miles of rising sewerage mains and 659 miles of storm water drains were laid.

### Department of Works

Apart from the work it carries out for the National Capital Development Commission, the Department of Works acts as design and supervision agent for other Commonwealth departments and instrumentalities. Total expenditure during 1969–70 on all operations amounted to \$11.9 million (\$11.4 million in 1968–69), comprising: building works—housing \$101,742, other building \$4,881,196; engineering works \$688,670, repairs and maintenance—buildings \$2,581,903, engineering \$3,388,188, and purchase of plant \$232,864.

## Production

See also the chapters dealing with particular subjects.

### Lands

Reference has been made in earlier issues of the Year Book to the general conditions of land tenure in the Territory and to the area of alienated and leased land, and the chapter Rural Industry of this issue contains statistical information on the subject. (See also § 1. Canberra: Fifty Years of Development, page 123 of Year Book No. 49.)

Under the *Seat of Government (Administration) Act* 1910–1965, no Crown lands in the Territory may be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of the Act. In general, leases of land in the city area are granted under the *City Area Leases Ordinance* 1936–1971. In special circumstances land may be leased for purposes other than business or residential under the *Leases (Special Purposes) Ordinance* 1925–1970 and for church purposes under the *Church Lands Leases Ordinance* 1924–1966. As considerable areas of Commonwealth owned land in the Territory are not immediately required in connection with the establishment of the City, they have been leased for agricultural or grazing purposes for terms consistent with the anticipated growth of Canberra under the *Leases Ordinance* 1918–1966. Some lands in the Territory, in areas generally remote from the City, remain in private ownership under freehold title.

The Commonwealth Territory at Jervis Bay, comprising about 28 square miles, was acquired from New South Wales for the possible provision of port facilities in connection with the Australian Capital Territory. A portion of the area is occupied by the Royal Australian Naval College (H.M.A.S. *Creswell*) and a Royal Australian Navy airfield. Several blocks fronting Sussex Inlet have been leased for guest houses and holiday camps, etc., under the *Leases Ordinance* 1918–1966, and an area of land in the Murray's Beach area has been set aside for possible use as an atomic power station under the control of the Australian Atomic Energy Commission. Apart from picnic and camping areas, experimental planting, afforestation and soil conservation activities, the remainder of the area is being maintained in its natural state.

### Forestry

Forestry operations in the Territory were begun on Mount Stromlo in 1915. Plantings up to 1925 were chiefly decorative, but since then a much wider programme has been undertaken. In 1926 a comprehensive review was made of the Territory's potential for forest development, and a programme for the development of commercial forests was approved. Most of the better native forest has since been placed under management, and, following survey and assessment work, forestry operations, including fire-control, have been extended to 100,000 acres of eucalypt forest in the lower Cotter Catchment Area and adjacent forested areas.

Afforestation work has also been undertaken, and softwood plantations (mainly *Pinus radiata*) have been established at Uriarra, Stromlo-Green Hills, Pierce's Creek, Kowen, Tidbinbilla, Jervis Bay and Boboyan. Experimental plots have been established at Jervis Bay and in the Brindabella Ranges, and soil conservation plantings made at various locations throughout the Territory. The total area of softwood plantations within the Australian Capital Territory at 30 June 1971 was 30,041 acres, of which 28,224 acres were *Pinus radiata*, the balance consisting chiefly of *Pinus ponderosa* and *Pinus nigra*, plus 829 acres at Jervis Bay, mainly *Pinus radiata* and *Pinus elliotii*.



Continued thinning operations have improved all Australian Capital Territory forests so that they now yield a wide variety of products. Board-logs and case timber form the bulk of production, but some poles, fencing timber, and pulpwood are now being produced. The yearly output from pine plantations has increased from 2,500 cubic feet in 1930-31 to 1.93 million cubic feet in 1970-71. The 1970-71 output was valued at \$505,000 delivered at mill door Canberra, yielding a net stumpage of \$191,000 to the Commonwealth. The total net stumpage from all Australian Capital Territory plantation sales to date is \$2,113,000.

There was no hardwood log production in 1970-71. Up to 30 June 1971 a total of 27.05 million cubic feet of pine logs had been cut from plantations, while hardwood production from the Australian Capital Territory, including Jervis Bay, remained at 4.3 million cubic feet.

Construction of a modern, integrated, timber-using complex is in progress. Operations are scheduled to commence early in 1972 with the production of sawn timber and plywood under an agreement in which the supply of pine logs is planned to be increased to 4.2 million cubic feet annually by 1975.

Over the past four years, recreational use of the forests has increased four-fold to an estimated 30,000 visitors per year. The Forestry Branch of the Department of the Interior has developed facilities to provide a unique forest type of recreation, catering for solitude as well as more intensive picnic area based recreation.

#### Agricultural, pastoral and secondary industries

During 1968-69 the production of the more important items of the agricultural and pastoral industry was: wheat 83,674 bushels; wool 2,059,000 lb; whole milk 898,000 gallons; meat (carcass weight), fresh 4,591 tons. The numbers of livestock depastured at 31 March 1969 were: horses 705; cattle 13,845; sheep 245,884.

As in the Northern Territory, the secondary industries established in the Australian Capital Territory are largely the service industries associated with the growth of the Territory.

#### AUSTRALIAN CAPITAL TERRITORY: FACTORIES, 1963-64 TO 1967-68

	1963-64	1964-65	1965-66	1966-67	1967-68
Number of factories(a) . . . . .	170	187	217	238	242
Average number of employed(b)—					
Males . . . . .	2,236	2,634	2,896	2,992	3,007
Females . . . . .	458	593	599	639	709
Persons employed . . . . .	2,694	3,227	3,495	3,631	3,716
Salaries and wages paid(c)—					
Males . . . . . \$'000	5,666	7,854	8,819	9,306	9,968
Females . . . . . „	607	848	1,047	1,177	1,317
Total salaries and wages paid . . . . .	6,273	8,702	9,866	10,483	11,285
Value of power, fuel, etc., used(d) . . . . .	502	644	760	735	830
Value of materials used(e) . . . . .	8,428	11,440	13,349	14,918	16,382
Value of production(f) . . . . .	11,097	14,060	17,418	18,860	19,372
Value of output(g) . . . . .	20,026	26,145	31,528	34,514	36,583
Value of land and buildings(h) . . . . .	11,669	20,583	21,891	22,779	23,410
Value of plant and machinery(h) . . . . .	5,103	9,682	10,134	10,368	10,023

(a) Any factory, workshop or mill in which four or more persons are employed or power other than hand is used.  
 (b) Average over whole year; includes working proprietors. (c) Excludes amounts drawn by working proprietors.  
 (d) Includes water and lubricating oil. (e) Includes also containers, etc., tools replaced and repairs to plant. (f) Value added in process of manufacture (i.e. value of output less value of materials and fuel used). (g) Value of goods produced including amounts received for repair work and other work done. (h) Depreciated or book values at end of year including estimated value of rented premises and machinery.

The following table shows preliminary results of the Manufacturing Census taken in respect of the year ended 30 June 1969.

**AUSTRALIAN CAPITAL TERRITORY:  
MANUFACTURING ESTABLISHMENTS, 1968-69**

NOTE. Direct comparisons with figures for previous years are not possible because of change in the census units, the scope of the census and the items of data. For details see Chapter 22, Manufacturing Industry.

Establishments operating during 1968-69	No.	116
Persons employed(a)	No.	2,724
Wages and salaries	\$m	9.3
Sales, transfers out and other operating revenue	\$m	30.8
Stocks at 30 June—1968	\$m	3.4
1969	\$m	3.6
Purchases, transfers in and selected expenses	\$m	16.5
Value added(b)	\$m	14.7

(a) At end of June 1969. Includes working proprietors. (b) Sales, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

### Transport and communication

Canberra is connected with the railway system of New South Wales at Queanbeyan by a line 5 miles long. This line was opened for goods traffic on 25 May 1914 and for passenger traffic on 15 October 1923. Direct or linking services operate between Canberra and Sydney and Canberra and Melbourne. Two airlines provide many services daily each way on the Sydney-Canberra-Melbourne route. Regular motor-coach services link Canberra with towns in New South Wales, Victoria and South Australia. The total length of roads in the Territory at 30 June 1970 was: bitumen and concrete, 588 miles; gravel, 248 miles; other formed roads, 26 miles; total, 862 miles. There are three radio broadcasting stations in the Territory, 2CY and 2CN of the national broadcasting system and 2CA, a commercial station, and two television stations, ABC Channel 3 of the national broadcasting system and CTC Channel 7, a commercial station.

### Social

See also the chapter Education, Cultural Activities and Research.

#### Education

The *Education Ordinance* 1937-1966 provides for the compulsory attendance at school of children between the ages of six and fifteen years. The Commonwealth Department of Education and Science is primarily responsible for the education of children in the Australian Capital Territory. By agreement, however, the New South Wales Department of Education arranges the teaching programme in accordance with its own curriculum and provides teaching staff. It is reimbursed for expenses incurred.

At 1 August 1970 there were ten government secondary schools in the Australian Capital Territory providing courses proceeding to the Higher School Certificate. Thirty-four schools provided courses at infants and primary levels, three of these being in rural districts and one in the Jervis Bay area. There were also a school for mentally handicapped children, and a school for physically handicapped children located at Canberra Hospital which was transferred to the same location as Turner Infants School in 1971. In addition, classes for deaf children were located at Ainslie and Mawson primary schools and at Telopea Park High School; and classes for mildly mentally handicapped children at Ainslie, Turner, Mawson, and Narrabundah primary schools and at Narrabundah High School. Two special schools served the needs of moderately intellectually handicapped children. A pre-school also opened in 1970 for these children. There is also a therapy clinic for children with speech defects, and a clinic for educational guidance. A further four primary schools and one secondary school are scheduled to commence at the beginning of the 1972 school year. At 1 August 1970 there were 16,826 pupils enrolled in the primary grades of government schools, and 8,227 pupils in secondary forms of government schools.

At 1 August 1970 there were twenty-two non-government schools in Canberra including seven secondary schools which provide courses leading to the Higher School Certificate. At 1 August 1970, 5,624 pupils were enrolled in the primary grades of non-government schools and 3,557 pupils were enrolled in the secondary forms of non-government schools.

Forty-seven pre-school centres, including two in the Jervis Bay area and a mobile unit which visits outlying areas of the A.C.T. provide pre-school facilities for approximately 3,080 children between the ages of three and five years. Pre-school education is also provided for deaf and physically handicapped children.

The Canberra Technical College, which follows generally the curriculum set by the New South Wales Department of Technical Education, provides trade, post-trade, certificate, and some hobby courses. In 1970 the Technical College provided instruction in one hundred and seven courses in twenty-one different schools of study. Student enrolments in 1970 were 6,877.

The Canberra School of Music provides a Diploma Course and individual study in a range of instruments and voice. At 30 June 1970 enrolments totalled 705.

For information about the Australian National University, refer to the section on universities, on page 636 in Chapter 20, Education, Cultural Activities and Research.

The Canberra College of Advanced Education was established following a decision by the Commonwealth Government in October 1966 to accept the recommendations of a committee of enquiry into the need for a college of advanced education in the Australian Capital Territory. The College is organised into schools and in 1970, courses were offered in the School of Administrative Studies, the School of Applied Science and the School of Liberal Studies. Courses in the School of Teacher Education commenced in 1971. It is envisaged that additional schools will be established as other specialised fields of study are introduced.

### Health

The Canberra Hospital serves the population of Canberra and surrounding districts. At 31 March 1971 it had 661 beds, a visiting medical staff of 180, 41 salaried medical staff, and a nursing staff of 680. For further information about health services in the Australian Capital Territory see the Public Health chapter in Year Book No. 53 (pages 549-50) and Year Book No. 56 (page 431) for administrative changes which took place in 1969.

### Justice

The Australian Capital Territory has a Supreme Court and a Court of Petty Sessions. There is an Australian Capital Territory Police Force, which at 30 June 1971 numbered 347, including the Commissioner and Superintendent. Of the total, 190 were engaged in the General Duties Branch, including 13 at Woden Police Station, two at Jervis Bay and two caring for the Police Citizens Boys' Club. The Traffic Branch comprised 72 members, including the specialised water police and those involved in accident investigation and the Breath Analysis Squad. There were 33 in the Criminal Investigation Branch, containing a Women Police Section of 5. There were also 38 in the Planning and Research Branch, including one member of the Women Police and three in the Special Branch. The Recruitment and Training Branch had a staff of nine, including one member of the Women Police in the Safety Education Section.

## Finance

In the following table the receipts and outlay of the Australian Capital Territory have been classified in a National Accounts form. The table covers transactions relating to the Australian Capital Territory in the Commonwealth Consolidated Revenue Fund and the following trust funds: Australian Capital Territory Forestry, Australian Capital Territory Housing, Australian Capital Territory Transport and Australian Capital Territory Suspense. In addition, details of the financial transactions of the following semi-government authorities are also covered: Australian Capital Territory Electricity Authority, Commonwealth Brickworks, National Capital Development Commission, and the Canberra Theatre Trust. Revenue derived by the Commonwealth from income taxes, sales tax, etc., levied in the Australian Capital Territory and expenditure by the Commonwealth in the Australian Capital Territory on such items as defence, civil aviation, railways, etc., and payments to residents from the National Welfare Fund are not included.



**AUSTRALIAN CAPITAL TERRITORY: RECEIPTS AND OUTLAY**  
**1965-66 TO 1969-70**  
 (\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>RECEIPTS</b>					
Taxation—					
Liquor . . . . .	171	197	226	259	285
Motor registration . . . . .	604	669	760	890	912
Stamp duties(a) . . . . .	296	305	298	382	1,969
Other . . . . .	300	915	733	729	882
Interest, rent, etc. . . . .	1,631	1,964	2,128	2,382	2,782
Public enterprises income . . . . .	5,949	6,564	7,778	7,870	9,718
Net sale of semi-government securities . . . . .	225	533	2,207	260	-94
Other receipts(b) . . . . .	-202	1,562	-732	203	242
Net charge to Commonwealth budget . . . . .	44,620	57,141	62,669	63,868	67,563
<b>Total receipts . . . . .</b>	<b>53,593</b>	<b>69,851</b>	<b>76,065</b>	<b>76,842</b>	<b>84,260</b>
<b>OUTLAY</b>					
Net current expenditure on goods and services—					
Law, order and public safety . . . . .	700	932	1,286	1,428	2,140
Education . . . . .	4,451	5,254	6,163	7,396	7,372
Public health and welfare . . . . .	2,971	3,973	4,494	4,754	5,248
Other . . . . .	5,515	6,998	7,912	9,391	10,616
Net capital expenditure on new assets and stocks—					
Education . . . . .	3,506	4,549	4,760	4,699	6,834
Cultural and recreational facilities . . . . .	2,484	2,993	4,426	963	584
Public health and welfare . . . . .	1,964	1,126	236	280	1,132
Water supply and sewerage . . . . .	5,427	13,479	12,718	6,839	7,260
Roads and bridges . . . . .	8,124	8,093	8,016	15,288	13,353
Power, fuel and light . . . . .	1,675	3,188	2,838	1,883	1,504
Housing . . . . .	8,582	6,383	8,038	9,746	8,409
Other . . . . .	10,091	9,404	11,810	14,321	17,626
Net purchase of existing assets(c) . . . . .	-12,326	-7,397	-7,647	-11,734	-14,626
Interest paid . . . . .	257	260	310	426	363
Cash benefits . . . . .	133	139	149	152	129
Net advances for housing . . . . .	9,801	10,281	10,398	10,254	14,445
Grants towards private capital expenditure . . . . .	237	195	158	757	1,870
<b>Total outlay . . . . .</b>	<b>53,593</b>	<b>69,851</b>	<b>76,065</b>	<b>76,842</b>	<b>84,260</b>

(a) Estimated for years prior to 1969-70. (b) Includes movements in cash, investments, etc. (c) Minus sign (-) denotes excess of receipts (from sales) over expenditures on, or purchases of, existing assets, including housing.

## NORFOLK ISLAND

### General description

Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29°S., longitude 168°E. approximately. Its total area is approximately 14 square miles, the island being about 5 miles long and 3 miles wide. It is 1,035 miles from Sydney and 660 miles from Auckland. The length of the coast line is 20 miles, and its form that of an irregular ellipse. Except for a portion on the south side and the landing place at Cascade on the northern side, almost inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between 45° and 81°F. with a mean of 68°F. The average annual rainfall is 56 inches.

After serving as a penal station from 1788 to 1813 and from 1825 to 1855, Norfolk Island in 1856 became the home of the remaining descendants of the *Bounty* mutineers. The estimated population at 30 June 1970 was 1,240, excluding visitors.



### Administration

In 1856 the island was created a distinct and separate settlement under the jurisdiction of New South Wales. In 1896 it was made a dependency under the Governor of that Colony, and finally, by the passage of the *Norfolk Island Act* 1913, it was accepted by the Commonwealth Parliament as a Territory of Australia. It is controlled by the Minister for External Territories through an Administrator. The Norfolk Island Council is established pursuant to the *Norfolk Island Act* 1957-1969 and is constituted in accordance with the provisions of the *Norfolk Island Council Ordinance* 1960-1970. The Council may consider and tender advice to the Administrator on any matter affecting the peace, order and good government of Norfolk Island, and must be consulted on certain legislative and financial matters. The Council comprises the Administrator as *ex officio* chairman and voting member and eight members elected biennially.

### Economic activity

The major economic activities of the island are the tourist trade, primary production, and Government instrumentalities.

*Primary industries.* The soil on the island is particularly fertile, the climate equable and the rainfall fairly evenly distributed except for a pronounced dry period in November. This enables a wide range of temperate and semi-tropical products to be cultivated. However, the island's comparative isolation presents trading difficulties, and production of bean seed, formerly the major export, has declined rapidly since 1962-63.

Fish abound off the island. In the past a number of ventures have been formed to exploit this resource, but they have been short-lived, mainly because of the lack of a sheltered harbour. A modern whaling station was started on the island in 1955, and production commenced during the second half of 1956. Owing to a marked scarcity of whales after 1961, however, the station was closed down.

An active forestry programme is being carried out to increase the resources of Norfolk Island pine and to introduce suitable types of eucalypts.

*Tourists.* Regular sea and air services to the island are available for those who seek a quiet holiday in surroundings of beauty and historic interest. There are at present, apart from flats and unlicensed guest houses, hotels and licensed guest houses, and further accommodation is being built to meet the steadily increasing number of visitors.

*Employment.* A large proportion of the population derives its income from various aspects of the tourist industry including the operation of hotels and duty-free stores. The Commonwealth Government provides services through staff from the Department of Civil Aviation and Interior (Meteorological Branch) and teachers are seconded by the N.S.W. State Education Department. A number of clerical and other positions are available to islanders in the Norfolk Island Administration. Very few people rely for their income entirely on agricultural pursuits.

### Trade, transport and communication

Imports to Norfolk Island since the 1939-45 War have risen from \$65,000 in 1945-46 to \$3,187,000 in 1969-70. The major proportion (\$1,737,000) in 1969-70 came from Australia and the Pacific Islands while New Zealand supplied \$481,000. Export rose from \$18,500 in 1945-46 to \$420,000 in 1960-61, but declined, after whaling ceased in 1962-63 and in 1969-70 amounted to \$279,000. Exports to Australia and the Pacific Islands, the principal market, amounted to \$228,000, while exports to New Zealand amounted to \$37,000. No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are the produce or manufacture of Norfolk Island, shipped direct to Australia, and not goods which if manufactured or produced in Australia would be subject to excise duty.

A shipping service to the island is maintained at approximately six-week intervals from Sydney via Norfolk Island to the New Hebrides and Solomon Islands, and thence back to Brisbane and Sydney. A service linking Sydney and Noumea includes a call at Norfolk Island on the outward voyage about every three weeks. Shipping between the island and New Zealand is infrequent.

A passenger and air freight service between Sydney and Norfolk Island is operated by Qantas Airways Ltd twice a week, and more frequently in peak periods. The service extends to New Zealand under charter to Air New Zealand Ltd.

There are approximately fifty miles of motor road on the island. A substantial section of the population possesses private motor cars, and taxi-cab and bus services are available.

An automatic telephone service is being established. A radio telephone service to Sydney is also being established. A local broadcasting service is operated by the Administration.

### Education

Education is free and compulsory up to the age of fifteen years. The school, which is conducted by the New South Wales Department of Education, conforms to the Australian standard of public education, ranging from kindergarten to the School Certificate (Fourth Form) examination. The teachers are provided by the New South Wales Education Department, although they receive salaries from the Norfolk Island Administration. The number of scholars enrolled at 30 June 1970 was 288.

Bursaries are available for pupils who wish to attend a mainland school either to continue their studies beyond the School Certificate level or undertake high school courses not available on the Island. Trainee scholarships are available for pupils who have left school and wish to undertake apprenticeship or similar training away from the Island.

### Judiciary

The judicial system of Norfolk Island consists of a Supreme Court and a Court of Petty Sessions. The Supreme Court is the highest judicial authority in the Territory and is a superior court of record with original criminal and civil jurisdiction. The jurisdiction of this Court is exercised by one judge sitting in Court or, to the extent and in the cases provided by or under ordinance, sitting in Chambers. The jurisdiction of the Court of Petty Sessions is exercised by the Chief Magistrate or any three magistrates other than the Chief Magistrate.

### Finance

The revenue of the Territory, together with an annual grant from the Commonwealth Government for administrative expenses, is paid to the credit of the Norfolk Island Trust Fund, and advances for administrative and developmental expenses are drawn from the account. The principal items of revenue and expenditure for the five years 1965-66 to 1969-70 were as follows.

#### NORFOLK ISLAND: REVENUE AND EXPENDITURE, 1965-66 TO 1969-70 (\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
<b>REVENUE</b>					
Commonwealth subsidy . . . . .	66	66	66	66	66
Customs duties . . . . .	85	90	110	105	116
Sale of liquor . . . . .	41	53	56	61	68
Post office . . . . .	174	138	122	260	219
All other . . . . .	41	50	71	87	130
<b>Total revenue . . . . .</b>	<b>406</b>	<b>397</b>	<b>425</b>	<b>579</b>	<b>599</b>
<b>EXPENDITURE</b>					
Administrative . . . . .	72	73	89	104	123
Miscellaneous services . . . . .	22	27	20	25	26
Social expenditure . . . . .	70	97	126	142	153
Repairs and maintenance . . . . .	27	66	67	87	89
Capital works and services . . . . .	57	126	232	87	120
Postal services . . . . .	33	32	59	56	57
Other business undertakings . . . . .	9	7	7	..	..
<b>Total expenditure . . . . .</b>	<b>289</b>	<b>428</b>	<b>600</b>	<b>501</b>	<b>568</b>

## PAPUA AND NEW GUINEA

The information under this heading is applicable to both the Territory of Papua and the Trust Territory of New Guinea. For details of the respective Territories *see* pages 1005 (Papua) and 1007 (New Guinea) and following pages. The sections on pages 983–9 have been prepared by the Director of the Commonwealth Bureau of Meteorology.

### General description

#### Geographical position

The Territory of Papua and New Guinea includes the Territory of Papua and the Trust Territory of New Guinea. The total area of approximately 180,000 square miles lies in the equatorial zone between latitudes 2° S. and 12° S. and longitudes 141° E. and 156° E. The Territory of Papua comprises south-east New Guinea and also the islands of the Trobriand, Woodlark, D'Entrecasteaux, and Louisiade groups. The Trust Territory of New Guinea extends from 2° S. to 8° S. and includes north-east New Guinea (also called 'the mainland'), Bismarck Archipelago (New Britain, New Ireland, Lavongai, Admiralty Islands), and Solomon Islands (Bougainville, Buka).

#### Geographical features

There is a high backbone mountain chain extending generally along the centre of the main island with coastal plains which widen in some areas, particularly in the Fly River Basin. The mountains, which are rugged, rise to 15,000 feet above sea level in some areas; the larger islands mostly have mountain backbones, some rising to about 10,000 feet. In many parts the highlands extend to the coast.

### Weather and climate

The climate, particularly the rainfall, over so wide an area as Papua and New Guinea, with its numerous islands and varying elevations, presents many variations. Generally speaking, the climate is hot and humid, except in the highlands where days are mild to warm and nights are cool. Mean temperatures vary little throughout the year, and there are no winter and summer seasons comparable to those of higher latitude.

The predominant seasonal feature of the Territory is the regular alternation between two major air-streams, the south-east trade winds and north-west monsoon. The 'south-east' season prevails approximately from May to October, and the 'northwest' season persists for a shorter period from about December to early April. Two short spells of calm weather occur between these two seasons.

#### Rainfall

There are great spatial variations in the amount of rainfall received over the Territory of Papua and New Guinea. The variations depend mainly upon the direction and speed of the air streams. These streams are moist, requiring only a small amount of lifting for condensation of water vapour to occur. Topography therefore has a dominating influence on the rainfall distribution.

#### Average annual rainfall

The table on page 985 shows the average annual and monthly rainfall for selected stations in the Territory. It may be seen that the spatial distribution of average annual rainfall varies greatly, being dependent mainly on topography in relation to prevailing winds. The annual averages vary from 39 inches at Port Moresby (township) to 227 inches at Kikori at the head of the Gulf of Papua. There are few rainfall observing stations above 6,000 feet, so that rainfall above that height must generally be estimated. The map on page 989 shows the rainfall distribution over the region for the year 1969.

#### Seasonal distribution of rainfall

Places in Papua such as Port Moresby, where the south-east trade wind does not blow directly onshore, have a dry season during May–October. Places such as Kikori have heavier rainfall during May–October because of the onshore south-east winds. In the Territory of New Guinea, where conditions are more equatorial, rainfall occurs throughout the year, but is heaviest in the November–April period at most places.

#### Variability of rainfall

There are marked variations from year to year in annual rainfall totals throughout the Territory. At Port Moresby (township), for example, in forty-two years of record the annual rainfall has varied from 72 inches to 23 inches; at Daru in fifty-four years of record the annual rainfall has varied from 156 inches to 46 inches; and at Madang in forty years of record the variation has been from 180 inches to 92 inches. The table on page 986 shows the annual rainfall at Port Moresby and Lae for the years 1946 to 1968 inclusive.



### Heavy rainfalls

Highest twenty-four hour rainfall registrations have included 21.60 inches at Pondo Plantation in New Britain and 17.60 inches at Cape Nelson on the east coast of the main island. Twenty-four hour falls greater than 15 inches have been recorded at a number of other stations in the Papua and New Guinea region. The highest twenty-four hour fall recorded in Australia was 36 inches at Crohamhurst, Queensland. All these registrations were for the restricted twenty-four hour period from 9 a.m. to 9 a.m. Higher falls, possibly approaching 30 inches, have probably occurred in the Territory in unrestricted periods of twenty-four consecutive hours.

### Temperature

Although the Territory has no summer and winter seasons, it has a wide range in temperature because of elevation differences. For each month the mean daily maximum temperature decreases by about 2° F. and the mean daily minimum temperature by about 4° F. for each 1,000 feet increase in elevation up to 5,000 feet.

A table on page 986 shows temperature and humidity data for five lowland and two highland stations. Mount Hagen, elevation 5,500 feet, is the highest station for which temperature data are available. However, both day and night temperatures continue to decrease with elevation above this level.

### Average seasonal temperature distribution

In the lowland areas there is a difference in temperature pattern between the areas south of the highlands and those to the north. In the south there is a tendency for temperatures to be lower in the May–October period than in the November–April period (e.g. Samarai). In the north there is little difference throughout the year (e.g. Madang). In the highlands, temperatures are appreciably lower than in the lowlands and are slightly lower in the middle of the year than they are at the beginning of the year (e.g. Goroka). The nights are cold in the highlands throughout the year; the mean daily minimum at Mount Hagen for July is 53.6° F.

### Extreme temperatures

The highest air temperature recorded at Lae (in twenty years of record) was 101.7° F. and the lowest was 66.3° F.; at Port Moresby (in twenty-four years of record) the highest was 97.4° F. and the lowest was 57.3° F.; at Mount Hagen (in thirteen years of record) the highest was 88.0° F. and the lowest 35.0° F. The mean daily range of temperature is about 15° F. at lowland stations and 20° F. at highland stations up to 5,000 feet elevation.

### Humidity

Humidity is high generally throughout the year. In the lowlands persistently high humidity in association with high temperatures is responsible for the human discomfort experienced. The average index of mean relative humidity for January and July is shown for selected stations in a table on page 986. This index has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the mean temperature. Being thus related to the mean temperature, this value of relative humidity is a good approximation to the daily mean.

In the lowland areas the average index of mean relative humidity (*see* table on page 986) is in the range 75–85 per cent throughout the year. There is little variation in the index from month to month at any station. This is in contrast with northern Australian localities where the south-east winds of the dry season result in low relative humidities. For example, Darwin's average index of mean relative humidity ranges from 81 per cent in February to 62 per cent in July.

In the highland areas up to 6,000 feet elevation the average index of mean relative humidity is within the range 70–80 per cent throughout the year. The lower temperatures experienced on the highlands relative to the lowlands result in conditions being generally more comfortable in the highlands.

### Evaporation

The only evaporation data available are records for Port Moresby. These show that the mean monthly tank evaporation varies from 5–6 inches per month in the early part of the year to 6–7 inches per month in the latter part of the year. The average annual tank evaporation at Port Moresby over an eleven-year period was 73.59 inches. It is probable that evaporation is less than this value in the higher humidity areas.

### Sunshine and cloud

Mean daily sunshine hours are recorded for each month at Port Moresby, and the figures show a variation from 6.1 hours per day in February and March to 8.4 hours per day in November. The mean daily amount of sunshine at Port Moresby for the year is 6.9 hours, which is significantly less than Darwin (8.4 hours) but comparable with Brisbane (7.5 hours)



At Port Moresby the mean cloud amount varies from 5.0 eighths per day in June to 6.9 eighths in February; at Lae the variation is from 6.1 eighths in May, June and October to 6.9 eighths in March. The mean daily cloud amounts for the year at Port Moresby and Lae are 5.8 and 6.5 eighths respectively, which are high in comparison with Darwin (3.1).

### Winds

As mentioned previously the south-east trade winds prevail from May to October and the north-west monsoonal winds prevail from December to March over most of the region. However, the broad-scale wind pattern may be completely masked by the effects of local topography and land and sea breezes. The mean 9 a.m. and 3 p.m. wind speeds and prevailing directions are shown in the tables on pages 987-8 for Port Moresby and Lae.

At Port Moresby the mean winds are stronger during the period May-November than during December-April; for example, the 3 p.m. mean wind for August is 15.4 mph and for March is 7.6 mph. The winds at 3 p.m. are much stronger than at 9 a.m.; for example, for the year the 3 p.m. mean wind is 11.5 mph and the 9 a.m. mean wind is 4.1 mph. The prevailing direction of the wind is south-east during May-November and north-north-west to south-west during December-April.

At Lae the winds are mainly lighter than at Port Moresby. In the period May-October the winds at Lae are lighter than in the period November-April. The winds at 3 p.m. are greater than at 9 a.m. except in February. The prevailing direction is north-west at 9 a.m. and south-east at 3 p.m. throughout the year.

### Storms and cyclones

The Papua and New Guinea region is subject to thunderstorm activity, squall lines and local storms throughout the year. Severe thunderstorms are frequent in the mountainous areas, but also occur in coastal lowlands. The main tropical cyclone belt lies to the south of the region, but occasionally a tropical cyclone affects the region, causing loss of life and property.

### Climatological tables

The averages and extremes for a number of elements recorded at Port Moresby and Lae are given in the tables on pages 987-8. These tables generally follow the format given for Australian capital cities included in Chapter 2 of this Year Book, the observational data being for available years of record to 1969 inclusive unless otherwise stated. Some elements included in the Australian capital city tables have been omitted from the tables for Port Moresby and Lae because of the inadequacy of observational records.

### PAPUA AND NEW GUINEA: AVERAGE MONTHLY AND ANNUAL RAINFALL FOR SELECTED STATIONS(a)

(Inches)

Station (lat. long.)	Years of record	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Bwagaia(b) (10° 41' 152° 51')	34	10.31	12.91	9.70	11.01	11.45	8.79	6.83	8.79	8.67	9.63	9.75	8.92	116.76
Daru(b) (9° 04' 143° 12')	55	11.06	10.17	12.94	12.24	8.74	4.06	3.31	2.16	1.70	2.18	4.46	8.47	81.49
Dogura(b) (10° 00' 149° 55')	42	9.20	8.31	8.63	5.85	3.70	3.57	2.94	2.50	3.05	2.80	3.41	4.35	58.31
Gobaragere(b) (9° 50' 147° 45')	33	7.43	6.98	7.85	8.56	4.30	3.49	1.66	2.17	2.37	3.07	5.12	6.88	59.88
Gusoea(b) (8° 32' 151° 4')	35	16.22	15.59	15.48	12.51	12.71	11.85	12.16	12.07	11.44	9.73	11.58	10.72	152.06
Itikimuna(b) (9° 25' 147° 29')	38	12.76	11.26	14.05	14.64	10.75	6.79	4.76	7.01	8.40	11.23	12.61	12.86	127.12
Kairuku(b) (8° 51' 146° 32')	39	9.47	10.25	9.07	5.35	1.73	1.83	1.10	0.62	1.48	1.64	2.11	5.52	50.17
Kerema(b) (7° 57' 145° 46')	42	9.63	8.85	10.63	11.19	16.87	15.81	13.74	13.70	13.89	11.75	8.38	7.85	142.29
Kikori(b) (7° 25' 144° 15')	42	12.22	13.17	14.10	17.20	29.20	28.08	25.44	21.60	23.94	17.75	12.64	11.43	226.77
Kokoda(b) (8° 58' 147° 43')	34	13.17	13.91	14.13	13.29	10.51	7.04	6.82	8.51	10.52	12.46	16.44	14.47	141.27
Kokopo(c) (4° 20' 152° 15')	33	8.02	6.94	8.80	6.74	4.68	5.01	6.42	6.00	4.01	4.52	6.44	9.03	76.61
Kwikila(b) (9° 44' 147° 44')	36	6.70	5.47	7.13	6.10	3.27	2.26	1.73	1.90	2.52	2.13	2.62	4.67	46.50
Lindenhafen(c) (6° 15' 150° 30')	30	6.66	5.82	6.39	11.23	22.71	31.60	41.00	43.56	31.82	19.32	11.85	7.42	239.38
Madang(c) (5° 13' 145° 47')	41	13.13	12.31	14.82	17.47	15.03	9.65	7.30	4.89	5.65	9.86	14.61	14.63	139.35
Port Moresby(b)(d) (9° 26' 147° 13')	23	6.66	8.42	7.23	6.77	2.09	1.66	0.78	1.37	1.49	1.51	2.67	6.12	46.77
Samarai(b) (10° 37' 150° 40')	43	6.72	7.15	9.81	10.26	11.52	11.93	8.05	8.11	10.94	8.39	7.54	5.23	105.65

(a) With thirty or more years of record to 1968.

(b) Papua.

(c) New Guinea.

(d) 23 years of record. See page 937

## RAINFALL: PORT MORESBY AND LAE, 1946 TO 1969

Year	Port Moresby (Papua)		Lae (New Guinea)	
	Amount	No. of days	Amount	No. of days
	in		in	
1946	61.79	137	(a)168.64	(a)248
1947	40.61	154	180.37	261
1948	45.82	138	179.26	267
1949	43.20	164	174.78	275
1950	47.67	137	158.51	251
1951	45.51	108	191.59	250
1952	54.88	150	165.58	274
1953	36.20	126	197.76	264
1954	46.49	118	173.70	277
1955	39.33	128	155.26	261
1956	56.60	141	122.39	233
1957	51.89	129	238.66	282
1958	46.02	107	190.02	250
1959	41.65	126	185.78	245
1960	34.17	116	167.50	260
1961	42.75	136	193.09	267
1962	43.98	133	182.84	261
1963	58.76	138	165.18	254
1964	55.02	151	163.10	244
1965	40.73	103	175.93	265
1966	41.25	116	206.19	291
1967	57.05	147	198.86	263
1968	44.44	116	185.68	265
1969	44.50	125	220.46	262

(a) Incomplete for July and August.

PAPUA AND NEW GUINEA: TEMPERATURE AND RELATIVE HUMIDITY FOR  
SELECTED STATIONS

Station	Lat.	Long.	Altitude (ft)	Years of record	Temperature °Fahr.				Relative humidity			
					Mean max. Jan.	Mean max. July	Mean min. Jan.	Mean min. July	Av. index of mean Jan. (a)	Av. index of mean July (a)	Mean 3 p.m. Jan.	Mean 3 p.m. July
Daru(b)	9° 04'	143° 12'	26	1940-1968	88.8	82.6	75.1	73.0	(f)84	(f)83		
Goroka(c)	6° 04'	145° 24'	5,200	1952-1968	78.5	76.7	59.1	56.4	(f)75	(f)72	(f)56	(f)52
Kikori(b)	7° 25'	144° 15'	30	1917-1968	90.4	81.3	73.5	71.9	(e)83	(e)91		
Madang(c)	5° 13'	145° 47'	14	1951-1968	86.3	85.3	73.7	73.0	(f)85	(f)87	76	75
Mount Hagen(c)	5° 51'	144° 09'	5,500	1953-1965	76.2	73.8	55.9	53.6	(e)79	(e)80	(d)65	(d)69
Samarai(b)	10° 37'	150° 40'	50	1956-1968	88.4	80.7	76.1	72.8	(f)81	(f)85	(f)74	(f)81
Wewak(c)	3° 35'	143° 40'	15	1956-1968	86.4	86.5	73.4	72.9	(f)83	(f)85	(f)75	(f)74

(a) See text, page 984, for explanation of this index. (b) Papua. (c) New Guinea. (d) 1955-65. (e) To 1965.  
(f) To 1966.

## CLIMATOLOGICAL DATA: PORT MORESBY (PAPUA)

(Jackson's Strip, Lat. 9° 26' S., Long. 147° 13' E., Height above M.S.L. 92 ft)

## BAROMETER, WIND, EVAPORATION AND CLOUD

Month	No. of years of observations	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m. bars)	Wind (height of anemometer 32 ft)				Mean amount of clouds, 9 a.m., 3 p.m., 9 p.m.(a)	Mean amount of evapo- ration (in)	
			Average miles per hour		Highest gust speed (mph)	Prevailing direction			
			9 a.m.	3 p.m.					
No. of years of observations	23		5	5	17	5	5	11	19
January		1,007.0	3.4	8.3	55	NNW	SW	6.17	6.7
February		1,007.1	3.9	9.3	52	N	SW	5.14	6.9
March		1,007.4	2.6	7.6	49	N	W	5.47	6.6
April		1,008.1	1.7	7.7	40	NNW	SSE	4.92	6.0
May		1,008.5	3.3	10.8	43	SE	SSE	5.43	5.1
June		1,009.7	5.7	13.0	46	SE	SSE	5.46	5.0
July		1,009.9	6.7	14.5	46	SE	SE	5.85	5.3
August		1,009.9	5.8	15.4	47	SE	SSE	6.43	5.5
September		1,010.0	5.3	14.5	46	SE	SSE	6.67	5.5
October		1,009.1	5.3	15.0	46	SSE	SSE	7.52	5.3
November		1,008.1	2.8	12.2	38	SE	SSE	7.53	5.4
December		1,007.0	2.3	9.6	54	NNW	SW	7.00	6.0
Year { Total									
Year { Averages		1,008.5	4.1	11.5	..	SE	SSE	73.59	..
Year { Extremes		..	..	..	55	..	..	..	5.8

(a) Scale 0-8.

## TEMPERATURE AND SUNSHINE

Month	Mean temperature (° Fahr.)			Extreme shade temperature (° Fahr.)		Extreme temperature (° Fahr.)	Mean daily hours of sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest	Lowest on grass	
No of years of observations	24	24	24	24	24	13	13
January	89.8	73.3	81.6	97.2 11/64	68.8 27/49	65.3 21/66	6.2
February	88.8	73.1	81.0	97.0 12/47	65.8 17/57	62.2 3/68	6.1
March	88.9	72.9	80.9	95.8 26/46	65.0 23/61	58.0 31/66	6.2
April	88.0	72.5	80.3	93.6 5/46	62.3 11/46	56.6 1/66	7.0
May	87.9	72.6	80.3	92.9 2/64	58.1 28/53	59.0 18/66	7.4
June	86.5	71.4	79.0	93.0 25/58	58.0 23/54	54.0 29/65	7.0
July	86.0	70.7	78.4	92.0 11/64	57.3 8/46	50.8 30/65	6.6
August	86.3	71.3	78.8	92.8 12/58	58.6 14/61	50.3 31/67	6.8
September	87.3	72.1	79.7	94.6 17/65	58.0 10/61	48.0 1/67	6.8
October	89.4	72.9	81.2	95.9 4/65	61.3 11/55	52.2 5/65	7.4
November	90.4	72.7	81.6	97.3 11/65	62.1 10/67	55.0 4/63	8.4
December	90.4	73.3	81.9	97.4 16/67	67.2 1/63	62.9 16/67	7.3
Year { Averages	88.2	72.4	80.3	97.4 ..	57.3 ..	48.0 ..	6.9
Year { Extremes	..	..	..	16/12/67	8/7/46	1/9/67	..

## HUMIDITY, RAINFALL AND FOG

Month	Vapour pressure mean 9 a.m. (m.bars)	Mean relative humid- ity % at 9 a.m.	Rainfall (inches)				Fog mean No. days	
			Mean mthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day
No. of years of observations	23	23	24	24	24	24	24	24
January	28.1	77	6.70	17	18.30 1967	1.02 1950	4.18 26/67	3.3
February	28.5	81	8.45	19	17.08 1957	2.37 1947	5.54 14/49	3.8
March	28.4	80	7.24	18	17.42 1951	1.11 1950	4.42 16/51	7.2
April	28.6	81	6.75	15	28.65 1946	0.36 1966	12.89 12/46	7.7
May	28.2	79	2.03	8	7.35 1952	0.08 1958	3.02 18/60	6.9
June	26.4	78	1.64	6	12.33 1963	0.00 1957	8.06 5/63	3.7
July	25.2	77	0.75	6	2.75 1949	0.01 1958	1.33 1/52	2.5
August	25.0	75	1.28	7	5.43 1953	0.02 1959	1.94 22/53	2.5
September	25.4	73	1.55	7	13.53 1958	0.00 (a)	5.90 5/58	1.9
October	26.2	69	1.48	7	7.12 1948	0.06 1951	2.13 31/64	2.4
November	26.4	68	2.68	8	9.22 1952	0.00 1965	3.56 29/54	3.3
December	27.6	73	6.30	13	10.57 1954	0.99 1967	4.83 29/65	2.9
Year { Totals	..	..	46.35	131	..	..	..	48.0
Year { Averages	27.0	76	..	11	..	..	..	..
Year { Extremes	..	..	..	..	28.65	0.00 (b)	12.89	..
					4/1946		12/4/46	

(a) 1948 and 1950.

(b) June 1957, September 1948 and 1950, and November 1965.

## CLIMATOLOGICAL DATA: LAE (NEW GUINEA)

(Meteorological Office: Lat. 6° 44' S., Long. 147° 00' E., Height above M.S.L. 25 ft)

## BAROMETER, WIND AND CLOUD

Month	Bar. corrected to 32° F. mn sea level and standard gravity from 9 a.m. and 3 p.m. readings (m.bars)	Wind (height of anemometer 32 ft)				Mean amount of clouds 9 a.m., 3 p.m., 9 p.m.(a)	
		Average miles per hour		Highest gust speed (mph)	Prevailing direction		
		9 a.m.	3 p.m.		9 a.m.		3 p.m.
No of years of observations	23	5	5	13	5	5	20
January . . . . .	1,006.8	7.7	8.3	51	NW	SE	6.8
February . . . . .	1,006.8	8.1	7.6	43	NW	SE	6.8
March . . . . .	1,007.2	6.8	7.3	40	NW	SE	6.9
April . . . . .	1,008.4	4.6	7.2	40	NW	SE	6.5
May . . . . .	1,009.5	2.8	6.5	36	NW	SE	6.1
June . . . . .	1,010.5	2.7	6.2	41	NW	SE	6.1
July . . . . .	1,011.0	2.0	6.6	36	NW	SE	6.5
August . . . . .	1,011.0	2.2	6.8	40	N	SE	6.5
September . . . . .	1,010.9	2.3	7.9	38	NW	SE	6.3
October . . . . .	1,010.1	2.9	7.9	40	NW	SE	6.1
November . . . . .	1,008.5	4.6	8.7	45	NW	SE	6.3
December . . . . .	1,007.4	6.0	8.4	41	NW	SE	6.7
Year { Averages	1,009.0	4.4	7.5	..	NW	SE	6.5
Extremes . . . . .	..	..	..	51	..	..	..

(a) Scale 0-8.

## TEMPERATURE

Month	<i>Mean temperature (° Fahr.)</i>			<i>Extreme shade temperature (° Fahr.)</i>	
	<i>Mean max.</i>	<i>Mean min.</i>	<i>Mean</i>	<i>Highest</i>	<i>Lowest</i>
No. of years of observations	20	20	20	20	20
January . . . . .	87.9	74.7	81.3	100.8 20/59	69.2 7/60
February . . . . .	88.1	74.7	81.4	99.1 14/57	70.0 24/62
March . . . . .	87.4	74.6	81.0	101.7 6/56	71.1 16/56
April . . . . .	86.1	73.9	80.0	93.0 4/56	70.4 22/66
May . . . . .	85.1	73.2	79.2	91.8 24/52	67.0 30/53
June . . . . .	83.4	72.2	77.8	92.2 8/58	67.0 20/53
July . . . . .	81.9	71.5	76.7	89.9 16/64	66.7 31/65
August . . . . .	82.2	71.6	76.9	90.4 28/64	67.0 27/55
September . . . . .	83.6	71.9	77.8	90.0 12, 13/50	66.3 13/61
October . . . . .	85.3	72.6	79.0	95.3 31/49	66.4 4/65
November . . . . .	86.6	73.4	80.0	94.0 30/61	69.6 (a)
December . . . . .	87.2	74.2	80.7	96.1 24/59	68.5 19/64
Year { Averages	85.4	73.2	79.3	101.7	66.3
Extremes	..	..	..	6/3/56	13/9/61

(a) 13/1965 and 11/1968.

## HUMIDITY, RAINFALL AND FOG

Month	<i>Rainfall (inches)</i>				<i>Greatest in one day</i>	<i>Fog mean No. days</i>
	<i>Vapour pressure mean 9 a.m. (m.bars)</i>	<i>Mean monthly</i>	<i>Mean No. of days of rain</i>	<i>Greatest monthly</i>		
No. of years of observations	23	25	25	25	25	23
January . . . . .	28.0	10.64	21	20.54 1964	4.21 1958	7.84 9/59
February . . . . .	28.5	9.24	19	15.88 1967	2.09 1957	5.26 8/53
March . . . . .	28.3	12.59	21	20.63 1952	5.52 1968	6.38 10/52
April . . . . .	28.7	15.77	22	23.71 1955	9.32 1968	7.84 15/53
May . . . . .	28.3	16.40	22	33.08 1957	2.65 1956	6.52 17/61
June . . . . .	26.5	16.12	22	30.32 1965	4.51 1964	8.90 4/51
July . . . . .	25.4	19.61	25	41.66 1953	5.63 1956	11.76 16/53
August . . . . .	25.0	20.38	24	33.99 1957	6.32 1951	10.18 14/47
September . . . . .	25.6	18.74	23	29.12 1950	7.58 1960	6.16 10/51
October . . . . .	26.5	14.84	21	26.20 1957	4.82 1956	5.77 20/63
November . . . . .	26.7	13.51	21	22.73 1948	5.04 1956	7.26 2/45
December . . . . .	27.7	13.08	21	23.81 1957	6.06 1951	8.96 16/68
Year { Totals	..	180.92	262	..	..	..
Averages	27.1	..	..	..	..	..
Extremes	..	..	..	41.66	2.69	11.76
				7/1953	2/1957	16/7/53



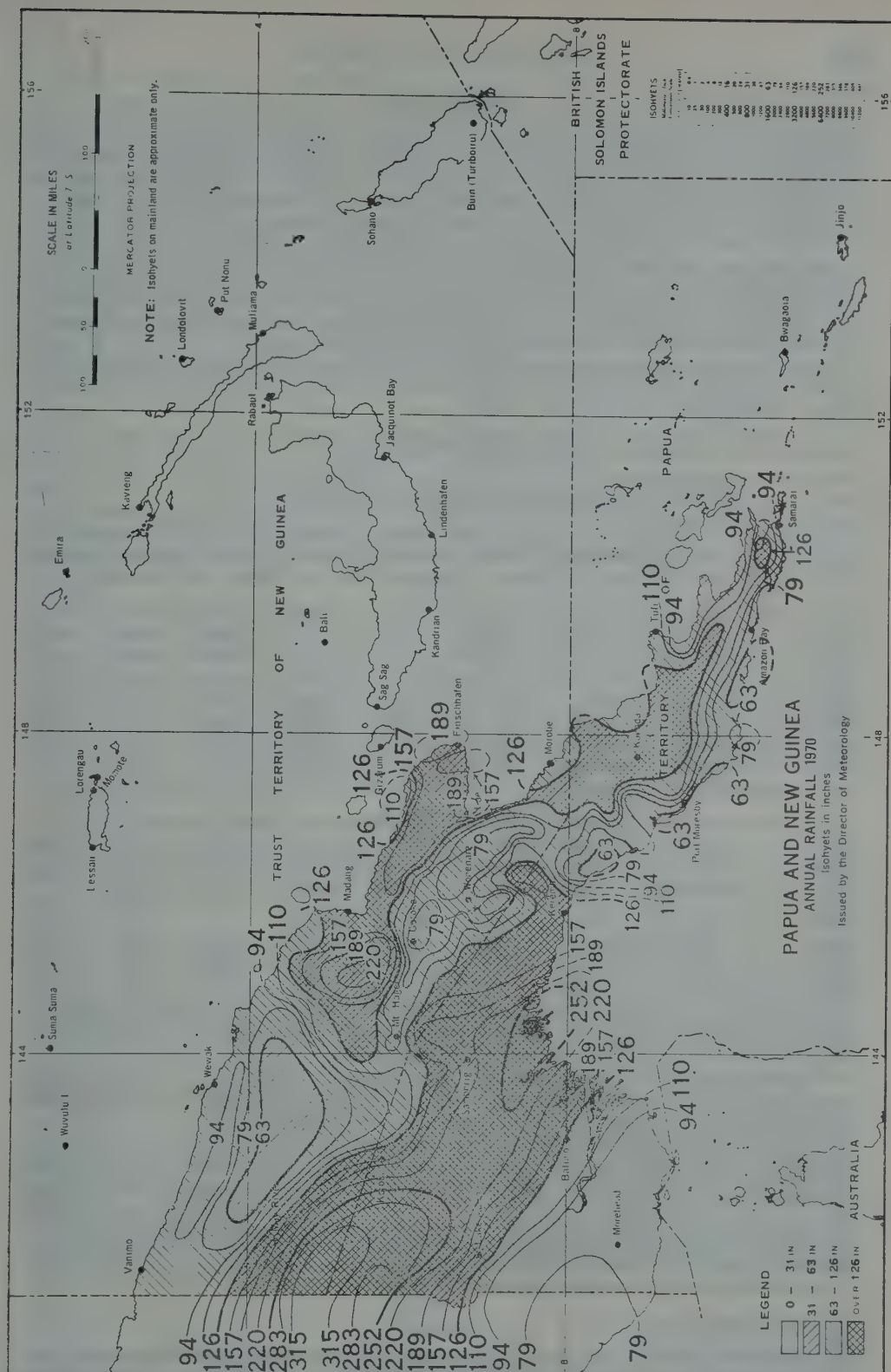


PLATE 51

### Population

Censuses of the non-indigenous population of the Territory of Papua and New Guinea have been taken in conjunction with censuses of the Commonwealth of Australia. For the indigenous population of the Territory of Papua and New Guinea, estimates of size, geographic location, and the broad age distribution of the population were available from the results of the Department of District Administration census (formerly known as the Tax Census). This was conducted over most of the Territory, but was continuous rather than conducted at a common date for all areas covered. No regular pattern of operations was adopted, although once the census had been taken in an area it was in general repeated fairly frequently. Although these estimates were of great value, the limitations of the information on population characteristics and the lack of simultaneous collection for all areas made them insufficient for many purposes. The 1966 census covered both indigenous and non-indigenous population, and thus superseded the traditional census of non-indigenes.

Figures for the non-indigenous population as enumerated at censuses held in conjunction with Commonwealth censuses and estimates of the indigenous population based on the Department of District Administration censuses are set out below.

#### PAPUA AND NEW GUINEA: POPULATION AT CENSUSES, 1921 TO 1966

Year	Indigenous					Non-indigenous			
	Enumerated			Persons estimated	Total persons	Males	Females	Persons	
	Males	Females	Persons						
PAPUA									
1921 . .	59,825	52,687	112,512	..	..	1,408	670	2,078	
1933 . .	..	..	170,836	..	..	1,232	941	2,173	
1941 . .	..	..	..	..	..	..	..	..	
1947 . .	..	..	..	..	..	2,057	1,182	3,239	
1950 . .	117,455	104,474	221,929	146,630	368,559	..	..	..	
1954 . .	151,464	134,732	286,196	202,200	488,396	3,867	2,446	6,313	
1961 . .	236,676	209,632	446,308	67,340	513,648	5,490	4,304	9,794	
1966 . .	310,153	281,806	591,959	..	591,959	8,307	6,070	14,377	
NEW GUINEA									
1921 . .	(a)100,445	(a)66,276	(a)166,721	..	..	2,502	671	3,173	
1933 . .	218,218	182,911	401,129	..	..	3,709	1,507	5,216	
1941 . .	324,830	318,988	(b)684,284	300,000	984,284	..	..	..	
1947 . .	..	..	..	..	..	4,369	1,831	6,200	
1950 . .	415,939	354,116	770,055	301,050	1,071,105	..	..	..	
1954 . .	538,113	472,480	1,010,593	184,714	1,195,307	7,201	4,241	11,442	
1961 . .	721,806	647,277	1,369,083	64,300	1,433,383	9,158	6,378	15,536	
1966 . .	810,153	748,205	1,558,358	..	1,558,358	11,746	8,546	20,292	

(a) 1920; figures for 1921 not available. (b) Includes 34,087 indentured labourers, 1,127 native constabulary, 4,823 attending approved mission schools, and 429 patients at Anelaua Leprosarium and Taskul Observation Colony (New Ireland), for which particulars of sex are not available.

The total indigenous population of Papua and New Guinea at the 1966 census was 2,150,317 persons, and the total non-indigenous, 34,669 persons. Estimated totals for 30 June 1970 are 2,412,808 and 48,961 persons respectively. See pages 1005 and 1008 for further details.

The population (indigenous and non-indigenous) of the major towns at the census, June-July 1966, was as follows: Port Moresby, 41,848; Lae, 16,546; Rabaul, 10,561; Wewak, 8,945; Madang, 8,837; Goroka, 4,826; Daru, 3,663; Mount Hagen, 3,315; Bulolo, 2,724; Lorengau, 2,446; Samarai, 2,201; Kavieng, 2,142. A population count held in conjunction with the setting up of a Local Government Electoral Roll in February-April 1970 showed that the population of Port Moresby was 56,206; Lae, 24,339; Madang, 11,151 and Rabaul 21,453 (although it should be noted that urban boundaries used in the Rabaul count were not comparable with the 1966 boundaries. A Census pre-test conducted in Goroka in July 1970 showed the population to be 7,882 persons.)

#### Population Census, 1966

The census was conducted over the period June-July 1966 and covered both indigenous and non-indigenous populations. For census purposes the indigenous population comprised the aboriginal peoples of the Territory of Papua and New Guinea, Australia, New Zealand, and the other islands

of Polynesia, Melanesia, and Micronesia, and all persons descended from these aboriginal peoples to the extent of more than one half. The non-indigenous population comprised all persons not covered by the definition of the indigenous population given above. The Census completely enumerated virtually all the non-indigenous population, together with all the indigenous population located in areas outside rural villages. The rural village population was estimated by means of a representative sample of approximately 10 per cent of rural villages. Consequently the figures published for the population of rural villages are estimates of total figures based on a representative sample, while those published for other areas are totals based on complete enumeration. Totals for a District or Territory as a whole are the sums of these estimated and actual figures.

A short description of the development operations undertaken before the 1966 census and of the actual census operations is given in Year Book No. 53, pages 141–2. A description of Methods and definitions used can be found in *Population Census, 1966—Preliminary Bulletin No. 20: Summary of Population* issued by the Bureau of Statistics, Konedobu, Papua. A similar population census was conducted in July 1971. These results are not yet available.

For details of selected characteristics of Population Census 1966 see Year Book No. 55, pages 1165–69.

### Administration

The *Papua-New Guinea Provisional Administration Act* 1945–1946, which provided for the transfer back of control from the military authorities to civil authorities after the 1939–45 War, was repealed by the *Papua and New Guinea Act* 1949, which came into force on 1 July 1949. The latter Act approved the placing of the Territory of New Guinea under the International Trusteeship system and provided for an Administrative Union of the Territory of Papua and the Territory of New Guinea with one Administrator, a Legislative Council and an Executive Council, one Supreme Court, and one Public Service.

For an outline of the development of the Legislative and Executive (later Administrator's) Councils between 1949 and 1963, see Year Book No. 51, page 117.

In May 1963 the Commonwealth Government passed an amendment to the Papua and New Guinea Act, making provision for a House of Assembly of sixty-four members to replace the Legislative Council. The house then consisted of ten official members appointed by the Governor-General on the advice of the Administrator, forty-four members elected by the people of the Territory on a common roll in forty-four open electorates, and ten non-indigenous persons elected on a common roll in ten special electorates comprising one or more open electorates. The first elections for the House of Assembly were held in February–March 1964, and the inaugural meeting of the new House was convened on 8 June 1964.

The 1963 Act also increased the membership of the Administrator's Council from seven to eleven, seven of whom must be elected members of the House of Assembly.

In October 1966 the Commonwealth Parliament passed a further amendment to the Papua and New Guinea Act, providing for an increase in the membership of the House of Assembly to ninety-four, sixty-nine members representing open electorates, fifteen from regional electorates and ten official members.

The second general election for the House of Assembly was held from 17 February–16 March 1968, and the Second House was convened on 4 June 1968. The Ministerial Nomination Committee in conjunction with the Administrator chose fifteen elected members who were appointed to seven Ministerial Member and eight Assistant Ministerial Member positions.

The *Papua and New Guinea Act* 1968 provides for the Administrator's Council to become the Administrator's Executive Council, deciding major matters of Territory policy. In June 1968 it had its first meetings. It consists of the Administrator, the seven Ministerial Members, three official Members, and a twelfth Councillor who is an elected M.H.A. but a non-office holder.

The result of constitutional instruments signed in August, 1970 by the Governor-General and the Minister for External Territories was to transfer full authority in relation to specified matters to designated ministerial office holders. This effectively enhanced the role of the Administrator's Executive Council as the Administrator became bound to accept its advice in respect of these specified matters. Ministerial office holders are fully responsible for the functions of the specified departments, or parts thereof.

Local government was introduced in 1949 by the Native Village Councils Ordinance which was replaced by the *Local Government Ordinance* 1963. The Administrator may establish by proclamation local government councils with authority in defined areas.

### Judiciary

The courts which exercise jurisdiction within the Territory are: the Supreme Court of the Territory of Papua and New Guinea, District Courts, Local Courts, Children's Courts and Wardens' Courts.



The Supreme Court is the highest judicial authority and has unlimited criminal and civil jurisdiction. Appeals lie from decisions of a single judge to the Full Court of the Supreme Court and, subject to prescribed conditions, from decisions of the Full Court to the High Court of Australia. District Courts have criminal jurisdiction over all summary offences, i.e. generally, all offences punishable by less than 12 months' imprisonment, and conduct preliminary hearings in respect of indictable offences. They also exercise civil jurisdiction over claims for amounts up to \$2,000. Local Courts have criminal jurisdiction over summary offences and may impose penalties not greater than a fine of \$100 or six months' imprisonment, plus civil jurisdiction over matters involving up to \$200. Children's Courts have jurisdiction over all offences by persons under the age of 16 years, except the most serious offences, and in affiliation and other child welfare cases. Wardens' Courts exercise jurisdiction over offences against mining laws and civil cases concerning mining or mining lands.

In addition, there is the Land Titles Commission set up under the *Land Titles Commission Ordinance* 1962-1970 to inquire into and determine rights in land, particularly native land. The Commission has the particular function under the *New Guinea Land Titles Restoration Ordinance* 1951-1968 to inquire into and determine claims to interest in land where the official records were lost or destroyed as a result of the Japanese invasion of New Guinea. For the purposes of the latter Ordinance, the Jurisdiction of the Commission is exercised by the Chief Commissioner (who must be qualified to be a judge of the Supreme Court) sitting with two Senior Commissioners.

### Agriculture and animal industry

#### Soils

Although many parts of Papua and New Guinea are covered by skeletal soils unsuitable for agriculture, there are extensive areas in all districts where fertile soils occur suitable for growing a variety of crops. Soils on the coastal plains consist mainly of alluvium and podsolised alluvium. The coastal swamp soils, of which there are extensive areas in the delta plains of the Sepik and Fly rivers and intermittently around the coasts and along the lower reaches of other rivers, are in general quite unsuited to any form of agricultural development.

Volcanic soils probably offer the greatest prospects for development. They are found mostly on the central plateau and southern foothills of the main island, but there are also areas in New Britain (particularly in the Gazelle and Willaumez Peninsulas), Bougainville and New Ireland, as well as in numbers of smaller islands. Other rich soils are the alluvials of the river valleys. The largest single area of this type is in the valley occupied by the Ramu and Markham Rivers.

#### Land tenure

The *Land Ordinance* 1962-1969 of the Territory of Papua and New Guinea, which came into operation in 1963, replaced much land legislation previously in force separately in the two Territories. This simplification in legislation was a major step towards applying uniform principles to land tenure throughout the whole of the Territory of Papua and New Guinea. All land in the Territory other than native land or land subject to any estates, rights, titles, or interests in force from time to time is Administration land.

There is considerable variation throughout the Territory in the nature of customary ownership of land. In most areas some rights remain in the landholding group, and individuals within the group have limited rights or use, either for life or for a shorter period. Thus the normal system by which the rights of ownership in land use are acquired is by birth to a landholding group. Transfer of rights between individuals by sale and purchase appears to have been unusual in the past, but this practice is now an established custom in some localities and appears to be increasing. Inheritance may be based on either patrilineal or matrilineal descent, or both. In parts of the Territory, however, there is a tendency for the whole inheritance system to change, particularly in communities where it is based on matrilineal descent. Following a close study of the problems in relation to land holdings by indigenes, the Government has laid down the following broad principles of policy.

The ultimate and long-term objective in Papua and New Guinea is to introduce throughout the Territory a single system of land holding regulated by the central Administration by statute, administered by the Department of Lands of the central Administration and providing for secure individual registered titles after the pattern of the Australian system.

Only the Administration working through the Department of Lands, Surveys and Mines and through the Registrar of Titles may issue and register land titles.

Land subject to native custom remains subject only to native custom until it is taken out of custom either by acquisition by the Administration or by a process, provided for by the *Land (Tenure Conversion) Ordinance* 1963-1968, of conversion of title to an individual registered title. Upon either acquisition or conversion of title, compensation is provided in respect of extinction of rights under native custom.



Land held under native custom may not be acquired outside of native custom by other than the Administration. Land may not be acquired by the Administration except for prescribed public purposes unless the native owners are willing to sell and the Administration is convinced, through its Division of District Administration, Department of the Administrator, that the land is not required by them, and conversion of title from native custom to individual registered title may take place only if all those interested in the land under native custom consent to conversion and the method of conversion.

The services of Commissioners under the *Land Titles Commission Ordinance* 1962-1970 are used, as a first priority, on investigations into claims by the Administration that land is ownerless and may therefore be declared administration land, on investigation into the ownership under native custom of land proposed to be acquired by the Administration, on settlement of disputes about the ownership of land held under native custom, and on investigations into the rights held under native custom in land proposed to be converted to individual registered title. The Commissioners, as opportunity offers, continue investigations into the holding of land under native custom; the results of such investigations are recorded for use in connection with future acquisitions or conversions of title.

The legislation and administrative steps necessary to put the remainder of this policy into effect are well advanced.

### Suitable crops

Most tropical crops can be grown in Papua and New Guinea. Those of commercial importance at present are coconuts, cocoa, coffee, rubber, tea, peanuts, pyrethrum and passion fruit. Major developments in the production of palm oil are under way. This crop is expected to be of future economic significance.

### Non-indigenous rural production

In 1968-69 there were 1,241 holdings in use by non-indigenous persons, 335 being in Papua and 906 in New Guinea. The total area of these holdings was 1,016,839 acres, 264,832 in Papua and 752,007 in New Guinea. The following tables summarise the information available for principal activities.

#### PAPUA AND NEW GUINEA: NUMBER OF HOLDINGS, AREA, PRODUCTION AND NEW PLANTINGS 1965 TO 1969

(Source: *Rural Industries Bulletin*, 1968-69 Bureau of Statistics, Papua and New Guinea)

Year ended 31 March—	Holdings	Area under crop(a)	Trees(a)	Production	New plantings	
					Area	Trees(b)
		acres	'000	tons	acres	'000
Coconuts—						
1965 . . . .	670	262,039	11,995	85,034	4,013	272
1966 . . . .	667	264,391	12,006	90,209	5,512	377
1967 . . . .	683	269,127	12,704	81,159	5,208	460
1968(c) . . . .	681	270,176	12,809	86,736	4,902	586
1969(c) . . . .	685	271,623	12,972	89,115	4,062	382
Cacao—						
1965 . . . .	435	116,981	19,792	14,326	7,058	1,835
1966 . . . .	439	122,226	20,696	14,427	8,354	1,870
1967 . . . .	447	126,147	21,830	15,059	4,981	1,366
1968(c) . . . .	447	129,706	21,400	18,092	5,446	1,749
1969(c) . . . .	443	133,235	22,180	18,134	5,095	1,690
Coffee—						
1965 . . . .	261	12,228	7,860	3,374	1,345	1,162
1966 . . . .	257	13,415	8,779	3,874	1,323	1,254
1967 . . . .	248	14,365	9,912	4,492	1,090	1,212
1968(c) . . . .	249	14,817	10,004	4,705	810	937
1969(c) . . . .	237	14,685	9,798	6,196	664	828
Rubber—						
1965 . . . .	70	33,317	3,768	5,183	1,238	249
1966 . . . .	81	35,417	3,998	5,333	1,847	344
1967 . . . .	86	37,043	4,177	5,437	1,260	305
1968(c) . . . .	89	35,878	4,126	5,711	484	167
1969(c) . . . .	83	33,964	3,901	5,850	471	134

(a) Includes mature and immature areas.

(b) Includes replacements.

(c) 30 June.

**PAPUA AND NEW GUINEA: AREA UNDER PRINCIPAL CROPS  
AND CROP PRODUCTION, YEAR ENDED 30 JUNE 1969**

*(Source: Rural Industries Bulletin, 1968-69 Bureau of Statistics, Papua and New Guinea)*

Crop	Recorded area in acres			Unit	Recorded production			Average yield per productive acre		
	Papua	New Guinea	Total		Papua	New Guinea	Total	Papua	New Guinea	Total
Permanent crops—										
Copra—										
Plantation . . . . .	33,951	237,672	271,623	ton	9,659	79,456	89,115	0.31	0.39	0.38
Trade(a) . . . . .				"	445	4,674	5,119			
Coconuts, for use as such . . . . .					34	420	454			
Cacao—										
Plantation . . . . .	10,219	123,016	133,235	ton	1,048	17,086	18,134	0.12	0.18	0.17
Trade(a) . . . . .				"	49	1,104	1,153			
Coffee—										
Plantation . . . . .	890	13,795	14,685	"	37	6,159	6,196	0.07	0.55	0.53
Trade(a) . . . . .				"	13	2,074	2,087			
Rubber . . . . .	32,447	1,517	33,964	"	5,850		5,850	0.23		0.23
Tea . . . . .	207	5,063	5,270	lb (dry)		761,066	761,066		449.5	449.5
Grain crops—										
Maize . . . . .	34	142	176	bus	470	2,267	2,737	13.82	15.96	15.55
Rice . . . . .	251	208	459	ton (paddy)	148	129	277	0.59	0.62	0.60
Sorghum . . . . .	377	1,248	1,625	bus	7,212	8,096	15,308	19.13	6.49	9.42
Crops for green fodder—										
Maize . . . . .	2	316	318							
Sorghum . . . . .	15	365	380							
Other . . . . .	93	1,040	1,133							
Industrial crops—										
Peanuts . . . . .	10	1,599	1,609	cwt (kernel)	37	6,185	6,222	3.70	3.87	3.87
Vegetable crops—										
For sale—										
Beans (green) . . . . .	7	18	25	cwt	119	160	279	17.00	8.89	11.16
Tomatoes . . . . .	15	18	33	"	487	402	889	32.47	22.33	26.94
Potatoes, English . . . . .	1	3	4	"		48	48		16.00	16.00
Potatoes, sweet . . . . .	45	343	388	"	1,581	17,531	19,112	35.13	51.11	49.26
Pumpkins . . . . .	24	5	29	"	960	144	1,104	40.00	28.80	38.07
Other . . . . .	82	67	149	"						
For consumption on holding—										
Potatoes, sweet . . . . .	697	3,515	4,212	cwt	20,691	197,891	218,582	29.69	56.30	51.90
All other . . . . .	520	1,797	2,317	"						
All other crops . . . . .	320	2,918	3,238	"						
Total . . . . .	80,207	394,665	474,872	"						

(a) Includes all produce acquired by purchase during the year from sources outside the holding.

### Livestock

Total cattle on non-indigenous holdings at June 1969 was 60,728. Indigenous involvement in the cattle industry is being encouraged. An estimated 5,870 head of cattle were owned by indigenes in 1968-69. Dairy farming is carried out on a small scale near major towns.

A number of British breeds of cattle are represented, but for best results the use of Zebu cross-bred types of cattle is desirable. For dairying the Jersey seems to be the best breed and adapts quite well to tropical conditions.

A central abattoir controlled by the Administration has been set up at Lae and Administration slaughterhouses at Port Moresby, Goroka and Mount Hagen. There are smaller private slaughterhouses at other centres.

The following table shows the numbers of the various kinds of livestock on non-indigenously occupied holdings in Papua and New Guinea at 30 June 1969.

## PAPUA AND NEW GUINEA: LIVESTOCK NUMBERS 30 JUNE 1969

(Source: *Rural Industries Bulletin*, 1968-69 Bureau of Statistics  
Papua and New Guinea)

<i>Kind of stock</i>	<i>Papua</i>	<i>New Guinea</i>	<i>Total</i>
Horses . . . . .	432	773	1,205
Cattle—			
For dairying—			
Cows—in milk . . . . .	302	988	1,290
dry . . . . .	363	918	1,281
Heifers, one year and over . . . . .	187	724	911
Heifer calves, under one year . . . . .	211	875	1,086
Bulls, one year and over . . . . .	60	239	299
Bulls under one year . . . . .	34	134	168
Total dairying cattle . . . . .	1,157	3,878	5,035
For beef—			
Cows and heifers, one year and over . . . . .	6,335	24,080	30,415
Calves, under one year . . . . .	1,146	5,216	6,362
Bulls, one year and over . . . . .	379	1,233	1,612
Bulls, under one year . . . . .	103	397	500
Other, one year and over . . . . .	3,426	13,378	16,804
Total beef cattle . . . . .	11,389	44,304	55,693
Total, all cattle . . . . .	12,546	48,182	60,728
Sheep . . . . .	52	329	381
Pigs—			
Boars . . . . .	71	237	308
Breeding sows . . . . .	315	773	1,088
Suckers, weaners, and slips . . . . .	824	1,902	2,726
Other . . . . .	55	421	476
Total pigs . . . . .	1,265	3,333	4,598
Goats . . . . .	824	583	1,407
Poultry(a)—			
Fowls . . . . .	(a)	(a)	168,757
Ducks . . . . .	(a)	(a)	3,757
Turkeys . . . . .	145	169	314
Geese . . . . .	(a)	(a)	45
Total poultry . . . . .	118,301	54,572	172,873

(a) Only recorded where poultry products are marketed or flocks exceed 100 birds.

## Forestry

Many species of tropical timbers are found in the Territory of Papua and New Guinea, and there is a large pure stand of *Klinkii* pine in the Bulolo Valley. This timber is used mainly for the production of plywood and veneer. The Territory forests produce all local timber requirements as well as exports of logs, sawn timber, plywood and veneer. The Administration operates a forestry school at Bulolo to train forestry officers, and has established a research centre for forest products at Hohola near Port Moresby as well as regional silvicultural stations and a large herbarium at Lae.

The Administration is making available for public application a number of extensive timber areas estimated to contain a total of about 14,000 million super feet of logs and possibly twice this quantity of pulpwood. It is intended that those areas should form the basis for the development of integrated forest industries, which would be large and economically viable. Feasibility studies have been undertaken by consultants and some interested firms. Subject to negotiation the areas will be allocated on long-term permits. The Administration has acquired from the indigenous peoples timber rights over 4.9 million acres of forest for industrial development. Reforestation of permanently dedicated land is being undertaken by the administration, the area planted to date being 25,423 acres.

At 30 June 1970, 72 permits and 52 licences were current, the total area of forest involved being 1,339,181 acres. The total number of sawmills was 63 and the total sawn timber produced during 1969-70 was 48.9 million super feet. Total log production was 214 million super feet (true volume) of which 79.6 million was exported.

### **Fishing**

Over 1,400 different species of fish are to be found in the coastal and inland waters of Papua and New Guinea and many are important food fish. Those of greatest commercial significance are tunas (mainly skipjack), prawns, barramundi, and tropical lobster. Efforts are being made to encourage indigenous fishermen to regard fishing as a source of cash income and not merely as a means of subsistence. This involves the Administration in research and extension work and requires the improvement of refrigeration, transportation and marketing facilities throughout the Territory. In the Highlands there is increasing interest in fish culture in freshwater ponds.

Commercial fishing for prawns by joint venture companies is increasing and joint venture surveys for skipjack on a commercial scale are giving promising results.

The value of exports in 1969-70 was fish \$849,000; crocodile skins \$452,000; marine shell \$141,000; cultured pearls (round and half) \$174,000.

### **Indigenous agriculture**

Most of the indigenous inhabitants of Papua and New Guinea are agriculturalists producing fruit and vegetables for their own consumption. The crops grown vary according to environment and altitude and include yams, taro and sweet potatoes, coconuts, bananas, papaws, maize, sugar cane, cassava, beans, peanuts, rice, cucurbits, and tobacco. Sago is the staple food in the extensive semi-inundated areas which occur along the lower valleys of the major rivers. In these areas it is cut largely from naturally occurring stands. In other parts of the country small areas of sago are grown along stream banks and in swampy patches and are regarded as a reserve in times of poor harvest. In recent years the indigenes have taken up the production of introduced crops such as peanuts, rice, cucurbits, tobacco and maize for their own consumption, and cocoa, coffee, tea, palm oil, passion fruit and pyrethrum for export. Some small-scale rubber growing is now being undertaken. In coastal areas large quantities of copra are produced. In 1968-69 estimated indigenous production was: copra 43,801 tons, coffee 14,942 tons, cocoa 5,833 tons. In many localities the indigenes follow a farming system known as bush fallowing rotation, which is described in Year Book No. 48, and earlier issues.

The growing of food is done by both the men and the women. The division of work is usually clearly defined within the village itself, but this division is not necessarily the same in all areas. Generally the felling of forests is done by the men, and carrying the harvested food home to the village is done by the women. Other work, however, such as cultivating, planting and weeding may be done by either men or women according to the customs of the particular village or area.

The advancement of indigenous agriculture for local food supply and improved land use in village gardens as well as for economic production of crops for sale have a high priority in Government policy for the Territory. In recent years the Administration has intensified the programme of agriculture extension work among the indigenes. Indigenous cattle projects are increasing rapidly.

### **Survey of indigenous agriculture and ancillary surveys, 1961-62**

A survey of the agriculture of indigenes of Papua and New Guinea was carried out in 1961-62 by the Territory Bureau of Statistics in conjunction with the Commonwealth Bureau of Census and Statistics and the Territory Department of Agriculture, Stock and Fisheries. A comprehensive report on the surveys was published by the Territory Statistician in 1963, and reference should be made to this for further information. A summary of the principal results of the survey appears on pages 1104-10 of Year Book No. 52. Statistics of indigenous cash crop and cattle projects are compiled annually by the Administration's Department of Agriculture, Stock and Fisheries.



**PAPUA AND NEW GUINEA: AREA OF PRINCIPAL CROPS AND  
CROP PRODUCTION, YEAR ENDED 30 JUNE<sup>(a)</sup>**

*(Sources: Rural Industries Bulletin 1968-69, Bureau of Statistics and Indigenous Crop and Cattle Statistics  
Department of Agriculture, Stock and Fisheries, Papua and New Guinea)*

	Area under crop (acres)			Quantity of production (tons)		
	Indigenous	Non-indigenous	Total	Indigenous (b)	Non-indigenous	Total
<b>Coconuts—</b>						
1965 . . .	287,897	262,039	549,936	33,602	85,034	118,636
1966 . . .	292,615	264,391	557,006	36,991	90,209	127,200
1967 . . .	305,630	269,127	574,757	34,504	81,159	115,663
1968 . . .	344,540	270,176	614,716	38,644	86,736	125,380
1969 . . .	348,742	271,623	620,365	43,801	89,115	132,916
<b>Cocoa—</b>						
1965 . . .	33,335	116,981	150,316	5,119	14,326	19,445
1966 . . .	35,915	122,226	158,141	4,131	14,427	18,558
1967 . . .	38,075	126,147	164,222	5,032	15,059	20,091
1968 . . .	39,569	129,706	169,275	5,546	18,092	23,638
1969 . . .	44,285	133,235	177,520	5,883	18,134	24,017
<b>Coffee—</b>						
1965 . . .	35,037	12,228	47,265	3,950	3,374	7,324
1966 . . .	41,590	13,415	55,005	6,791	3,874	10,665
1967 . . .	46,613	14,365	60,978	10,566	4,492	15,058
1968 . . .	47,691	14,817	62,508	9,634	4,705	14,339
1969 . . .	49,666	14,685	64,351	14,942	6,196	21,138
<b>Pyrethrum—</b>						
1965 . . .	1,652	..	1,652	140	..	140
1966 . . .	3,224	..	3,224	252	..	252
1967 . . .	3,815	..	3,815	551	..	551
1968 . . .	2,867	..	2,867	457	..	457
1969 . . .	4,104	..	4,104	398	..	398
<b>Rubber—</b>						
1965 . . .	1,049	33,317	34,366	27	5,183	5,210
1966 . . .	1,538	35,417	36,955	31	5,333	5,364
1967 . . .	2,617	37,043	39,660	23	5,438	5,461
1968 . . .	3,404	35,878	39,282	13	5,711	5,724
1969 . . .	4,222	33,964	38,186	26	5,850	5,876

(a) Non-indigenous figures refer to year ended 31 March, for 1967 and earlier years. (b) Includes all produce acquired by purchase during the year from sources outside the non-indigenous holdings. Excludes amount consumed by growers.

### Co-operative societies

Co-operatives are under the guidance of the Department of Business Development. The present structure of the co-operative movement is based on primary societies, associations of societies, regional unions and a Territory-wide Federation formed by the unions. At 30 June 1970 there were 329 primary societies with 132,000 members. Turnover exceeded \$6m including \$4.6m from produce. In addition there are service organisations for wholesale trade, insurance and shipping. A Co-operative College is being set up near Port Moresby with United Nations Development Programme and International Labour Organisation assistance. The first buildings were opened in May, 1971.

### Indigenous labour

At 30 June 1971 there were approximately 332,000 Papuans and New Guineans wholly or mainly engaged in the money-raising work force, of whom 154,000 were wage and salary earners.

Minimum wages and conditions of employment for Papuan and New Guinean workers are prescribed by statute under the *Native Employment Ordinance* 1958-1971, the *Industrial Relations (Minimum Wages Board) Ordinance* 1971, and the *Public Service (Papua and New Guinea) Ordinance* 1964-1971. Conditions of employment and wage rates are also prescribed by awards negotiated by agreement between organisations of employers and employees and by determinations of arbitral tribunals established under the *Industrial Relations Ordinance* 1962-1971 and the *Public Services Conciliation and Arbitration Ordinance* 1969-1970.

The minimum statutory wage for an unskilled worker is \$5.90 a week. Where a worker is provided with accommodation, food, clothing and other issues, deductions may be made from the cash wage by agreement between employer and employee up to legally prescribed limits. The maximum permissible deductions for accommodation and food are 87 cents and \$2.50 a week respectively.

General employment agreements are in force in Lae, Goroka, Mount Hagen, Madang, Wewak, Vanimo, Kavieng, Rabaul, Lorengau, Daru, Popondetta, Samarai-Alotau-Bwagaoia and Port Moresby. These agreements apply to all workers employed by members of the Employers' Federation regardless of whether or not they are members of a Workers' Organisation (other than those employees directly engaged in primary production, domestic duties, stevedoring operations or in shipping services). In many of the above centres or localities the agreements are applied to all workers engaged not only by members of the Employers' Federation but also by employers who are not members of the Federation due to common rules being declared. The agreements cover annual and sick leave entitlements and rates of pay and conditions of employment for workers in those areas. In all cases the agreements are negotiated between the Employers' Federation of Papua New Guinea and the local workers' association or union.

At Kerema, Kieta and Lombrum similar rates of pay and conditions of employment are paid. At these localities, however, the Administration or Commonwealth departments initially agree to the increase to urban rates of pay in the absence of any Employers' Federation member operating in these towns.

In addition to agreements applying to workers in particular localities there are also awards which apply to workers in particular industries, e.g. stevedoring, timber, building and construction and mining.

The minimum wage rates for adult unskilled workers in industries and locations covered by awards and agreements range between \$6.50 and \$8.00 a week. Margins for skill are prescribed for semi-skilled and skilled workers ranging up to about \$30 a week.

The *Industrial Organizations Ordinance* 1962-1970 provides for the registration and control of industrial organisations. At 30 June 1971 there were thirty-five registered employees' organisations in Papua New Guinea with a total membership of 27,316 workers, including 22,451 Papuans and New Guineans. Nine of the above employee organisations have joined together to form the Federation of Workers' Associations of Papua and New Guinea which was registered on 4 March 1970. There was one employers' organisation registered under the *Industrial Organizations Ordinance*.

On 18 June 1971 the House of Assembly passed legislation to establish a Bureau of Industrial Organisations. The functions of the Bureau are to encourage and assist the formation and development of industrial organisations of employers and employees.

The Papua New Guinea Labour Advisory Council advises the Administrator's Executive Council and the Government on labour matters generally, and in particular on:

- methods of improving industrial relations,
- measures needed to achieve full and efficient use of the country's manpower,
- methods of bringing about rapid localisation of the work force in the private sector and incentives and other measures to achieve this end,
- measures to improve productivity, and
- trade union development.

In 1970, 2,494 Papuans and New Guineans completed courses of study and training in tertiary and post-secondary vocational training institutions in Papua New Guinea. The corresponding numbers for 1968 and 1969 were 1,793 and 2,066 respectively.

At 30 June 1971, there were 1,439 indigenous apprentices indentured under the Apprenticeship Ordinance, training in twenty-eight trades. The public sector was responsible for 761 indentures and the private sector 678. At the same date forty-nine non-indigenous apprentices were indentured. Outputs of qualified artisans from the apprenticeship scheme have increased from 137 in 1969 to 326 for the year ending 30 June 1971.

## Housing

Village housing is constructed to traditional patterns using local materials including bush timber, bamboo, grass, pit-pit and sago palm leaves. Town housing is generally constructed from comparatively expensive imported material including fibrous asbestos cement, aluminium and galvanised iron. The majority of houses are timber framed and made from both locally milled and imported timber.

The rapid growth of urban areas consequent upon increased economic development has created a housing shortage. Major programmes are directed towards reducing this shortage.

During 1969-70 the Administration completed accommodation for 1,355 married and 702 single officers.

The Housing Commission completed its third year of operations in 1970-71. Completed dwellings including those taken over from the Administration, at 30 June 1969 were 602; at 30 June 1970 were 720; and at 30 June 1971 were 641 (including 11 staff houses).

## Secondary industries

The major manufacturing industries are generally those processing primary products, mainly for export. Examples of these are plywood, coconut oil, copra by-products, desiccated coconut and pyrethrum.

Nevertheless industries catering for the rapidly expanding local market remain numerically predominant. These include the brewing of beer, furniture making and assembly of electrical appliances; the production of cigarettes and twist tobacco, aerated waters, clothing, plastic articles, concrete products, glass bottles, drums industrial gases, chemicals, fibreglass products, nails and other wire products, packaging and paper products, paints, metal louvre frames, wood preservative, metal roofing, water heaters, cast-iron stoves and other building materials; tyre repairs, fire protection equipment, agricultural machinery, matches, printing and ship-building.

A wide variety of services has also been established such as engineering workshops, plumbing establishments, motor repairs and electrical services.

### PAPUA AND NEW GUINEA: SUMMARY OF FACTORY OPERATIONS, 1967-68 AND 1968-69

(Source: *Secondary Industries Bulletin* 1968-69, Bureau of Statistics, Papua and New Guinea)

	Papua		New Guinea		Total	
	1967-68	1968-69	1967-68	1968-69	1967-68	1968-69
Number of factories(a)	195	203	361	406	556	609
Average number employed(b)	4,221	4,261	7,199	9,026	11,420	(c)13,287
Salaries and wages paid(d)	\$'000 4,860	5,218	7,405	8,798	12,265	14,016
Value of power, fuel, light, etc., used(e)	526	484	1,177	1,322	1,703	1,806
Value of materials used(f)	8,728	9,148	25,424	29,234	34,152	38,382
Value of production(g)	10,712	11,937	19,253	23,106	29,965	35,043
Value of output(h)	19,967	21,569	45,854	53,661	65,821	75,231
Value of land and buildings(i)	7,855	7,960	9,357	11,891	17,212	19,852
Value of plant and machinery(i)	12,370	13,391	8,461	10,814	20,831	24,206

(a) Any factory, workshop or mill in which four or more persons are employed or power other than hand is used. (b) Average weekly employment including working proprietors. (c) Comprising 12,769 males and 518 females. (d) Excludes drawings by working proprietors. (e) Includes water and lubricating oil. (f) Includes value of containers, packing, etc., tools replaced, and repairs to plant. (g) Value added in process of manufacture (i.e. value of output less value of materials and power, fuel, etc. used). (h) Value of goods produced including amounts received for repair work and other work done. (i) Depreciated or book value at end of year, including estimated value of rented premises and machinery.

### PAPUA AND NEW GUINEA: FACTORY OPERATIONS BY CLASS OF INDUSTRY, 1968-69

(Source: *Secondary Industries Bulletin* 1968-69, Bureau of Statistics, Papua and New Guinea)

	Class of industry				Total
	Industrial metals, machines and conveyances	Food, drink and tobacco	Sawmills, plywood and joinery	Other industries	
Number of factories	281	94	152	82	609
Number of employees—					
Non-indigenous	n.a.	n.a.	n.a.	n.a.	2,330
Indigenous	n.a.	n.a.	n.a.	n.a.	10,957
Total employees	4,273	3,225	3,932	1,857	13,287
Salaries and wages paid	\$'000 6,902	1,878	3,147	2,088	14,016
Value of power, fuel and light, etc.	309	558	333	607	1,806
Value of materials used	9,617	13,580	6,549	8,636	38,382
Value of production	11,680	8,359	8,000	7,004	35,043
Value of output	21,605	22,497	14,883	16,246	75,231

See footnotes to previous table.

NOTE. Electricity generation is included in 'Other industries'. For details of electricity generation, see Chapter 28, Electric Power Generation and Distribution.

## Trade, transport and communication

## Value of imports and exports

PAPUA AND NEW GUINEA: IMPORTS AND EXPORTS  
1965-66 TO 1969-70  
(\$'000)

(Source: Overseas Trade Statistics, Bureau of Statistics, Papua and New Guinea)

	1965-66	1966-67	1967-68	1968-69	1969-70(p)
<i>Total imports(a)</i> . . . .	110,431	127,379	(b)145,303	150,455	214,161
Exports—					
Domestic exports . . . .	43,885	46,113	59,089	64,896	71,653
Re-exports . . . . .	5,975	7,107	11,161	10,348	22,093
<i>Total exports</i> . . . . .	49,830	53,220	70,250	75,244	93,746

(a) Includes value of outside packages.

(b) Includes floating oil rig valued at \$8 million, re-exported in July 1969.

## Country of origin or destination

PAPUA AND NEW GUINEA: COUNTRY OF ORIGIN OF IMPORTS  
1965-66 TO 1969-70  
(\$'000)

(Source: Overseas Trade Statistics, Bureau of Statistics, Papua and New Guinea)

Country of origin	1965-66	1966-67	1967-68	1968-69	1969-70(p)
Australia . . . . .	62,452	71,160	78,108	82,165	114,209
Canada . . . . .	878	736	852	1,162	2,982
Ceylon . . . . .	296	320	366	341	342
China (mainland) . . . . .	1,600	2,257	1,715	2,758	2,248
France . . . . .	448	573	825	1,402	1,668
Germany, Federal Republic of . . . . .	2,320	2,687	2,739	3,448	3,920
Hong Kong . . . . .	4,045	4,306	4,583	4,760	5,607
Italy . . . . .	297	363	1,449	746	1,119
Japan . . . . .	9,996	13,073	14,448	17,849	26,306
Malaysia and Singapore . . . . .	3,337	3,471	3,874	4,357	7,314
Netherlands . . . . .	563	4,468	880	913	2,022
New Zealand . . . . .	328	249	77	841	2,607
Sweden . . . . .	770	455	480	610	610
United Kingdom . . . . .	8,644	7,141	7,213	8,574	12,313
United States of America . . . . .	7,507	7,804	(a)19,613	11,589	22,451
Other Countries . . . . .	6,950	8,314	8,081	8,940	8,445
<i>Total</i> . . . . .	110,431	127,379	145,304	150,455	214,161

(a) Includes floating oil rig valued at \$8 million.



**PAPUA AND NEW GUINEA: COUNTRY OF DESTINATION OF EXPORTS**  
**1965-66 TO 1969-70**  
 (\$'000)

*(Source: Overseas Trade Statistics, Bureau of Statistics, Papua and New Guinea)*

<i>Country of destination</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70(p)</i>
Australia	23,045	24,857	29,288	29,548	41,342
Germany, Federal Republic of	2,283	3,030	4,656	8,403	7,607
Japan	1,981	2,794	4,652	3,732	8,560
Netherlands	1,456	1,192	2,194	3,869	4,389
United Kingdom	16,577	14,543	20,279	18,769	15,379
United States of America	2,287	3,311	5,403	5,662	11,137
Other Countries	2,201	3,493	3,778	5,261	5,332
<b>Total</b>	<b>49,830</b>	<b>53,220</b>	<b>70,250</b>	<b>75,244</b>	<b>93,746</b>

**Principal commodities exported**

**PAPUA AND NEW GUINEA: PRINCIPAL DOMESTIC EXPORTS**  
**1965-66 TO 1969-70**  
 (\$'000)

*(Source: Overseas Trade Statistics, Bureau of Statistics, Papua and New Guinea)*

<i>Commodity</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70(p)</i>
Copra	14,298	9,994	13,943	14,804	13,340
Other coconut products	6,589	5,840	7,405	6,361	6,408
Coffee beans	8,787	10,208	14,320	15,531	20,181
Cocoa beans	4,435	9,545	11,794	16,060	15,693
Timber(a)	1,697	2,264	2,662	2,296	3,802
Plywood(b)	1,987	2,167	2,429	2,504	2,702
Rubber(c)	2,576	3,481	1,956	2,276	2,858
Gold	947	914	825	807	839
Crayfish and prawns	17	33	978	268	651
Crocodile skins	1,001	737	509	473	452
Peanuts	527	521	430	469	553
Pyrethrum extract	89	390	417	313	332
Passionfruit extract	174	112	202	122	131
Tea	11	3	42	297	645
Other	750	904	1,177	2,315	3,068
<b>Total</b>	<b>43,885</b>	<b>46,113</b>	<b>59,089</b>	<b>64,896</b>	<b>71,653</b>

(a) Logs and sawn timber. (b) Plywood, veneer and battery veneer. (c) Raw and scrap rubber.

**Shipping**

In 1969-70 shipping entries (excluding coastal shipping and cargoes) at Territory ports totalled 1,903, and 1,289,000 tons of cargo were discharged and 623,000 tons were loaded. Corresponding figures for 1968-69 were 1,543, 1,000,000 and 524,000 respectively.

Regular passenger and freight services operate between Australia and Papua and New Guinea. Vessels trading between Australia and the East also call at Territory ports, and there are services from continental and United Kingdom ports. Coastal and inter-island shipping services are maintained by vessels operating from the principal ports of the Territory.

### Other forms of transport and communication

Scheduled flights provide a network of air transport throughout Papua and New Guinea and regular air services link the Territory with Australia and neighbouring Territories, also with Manila, Hong Kong, Honiara and Jaipura. There were 406 licensed aerodromes in the whole of Papua and New Guinea at 30 June 1970, and of these 12 were the responsibility of the Department of Civil Aviation, 131 of the Administration, and 263 were privately owned. Much of the internal traffic and freight is carried on a charter basis.

At 30 June 1969 there were 7,374 miles of roads in the Territory of which 2,516 were adequately paved. Total motor vehicle registrations (excluding defence force vehicles) at 31 December 1970 were 33,667.

Telephone services operate between the main centres by radio telephone. These together with telex and telegraph services are operated within the Territory by the Department of Posts and Telegraphs, while overseas traffic is handled by the Overseas Telecommunications Commission. The Australian Broadcasting Commission broadcasts on medium wave and short wave from Port Moresby and Rabaul. The Administration Department of Information and Extension Services operates transmitters at a number of centres, broadcasting programmes in several local languages.

## Education and health

### Education

Schools in Papua New Guinea are conducted by the Administration and various Christian missions. In February 1970 the Australian Government adopted the recommendations of the Advisory Committee on Education in Papua and New Guinea, the House of Assembly subsequently passed the *Education (Papua and New Guinea) Ordinance, 1970* and the *Teaching Service (Temporary Provisions) Ordinance, 1970*. The new legislation provided for the voluntary merger as from 1 July 1970 of mission schools and colleges, and teaching staff with those of the Administration into a unified Territory Education System and a single Territory Teaching Service. A representative Territory Education Board and a number of District Education Boards were created to advise on educational planning and administration at the national and district levels respectively. A Teaching Service Commission was also created to employ teachers and to determine their salaries and conditions of service.

At 30 June 1970, 582 primary, secondary, technical and vocational schools were maintained by the Administration for 97,000 children. The total number of pupils in the various grades of the 1,170 mission schools was 142,000. There is also a correspondence school. To assist the educational work of the missions the Administration provides expert advice, educational equipment and textbooks, teachers' salaries and grants-in-aid. Teachers are recruited from Australia and overseas and some are trained at the Australian School of Pacific Administration, Sydney, and in 12 teachers' colleges in Papua New Guinea conducted by the missions and the Administration.

At the post-secondary and tertiary level of education, as well as the University of Papua and New Guinea and the Institute of Technology, there are a range of specialised institutions operated by Administration and Commonwealth Departments, including technical and teachers colleges, School of Valuation, Police Training College, Dental College, Vudal Agricultural College, Bulolo Forestry School and others. The University of Papua and New Guinea has faculties of Arts, Law, Science, Education and Medicine. In 1970 there were 818 students enrolled in degree and post-graduate courses, of whom 404 were Papuans and New Guineans. In August 1970 the University graduated its first group of students, 6 of the 10 graduates being Papuans and New Guineans. The Papua and New Guinea Institute of Technology conducts diploma courses in civil, electrical and mechanical engineering, surveying, architecture and building technology, accountancy and business studies, and in 1970 there were 229 enrolments (9 expatriates). At its first graduation ceremony in March 1970, four students received diplomas of surveying.

In November 1970 the Minister for External Territories appointed a Committee of Inquiry into Higher Education in Papua and New Guinea to advise on the future development and co-ordination of higher education to meet the national priorities of Papua and New Guinea.

### Health

The Department of Public Health of the Territory of Papua and New Guinea has the general oversight of all medical and dental services. The Department has the following seven functional divisions: medical services, preventive medicine, medical training, maternal and child health, dental education, administrative services, and mental health. To facilitate administration and co-ordination of the field services of the Department of Public Health, the Territory is divided into four geographical regions: the New Guinea Mainland, Highlands, New Guinea Islands Region and Papua.

## Finance

## Revenue and expenditure

PAPUA AND NEW GUINEA: REVENUE AND EXPENDITURE, 1965-66 TO 1969-70  
(\$'000)

	1965-66	1966-67	1967-68	1968-69	1969-70
REVENUE					
Customs . . . . .	11,783	14,916	16,555	17,669	23,951
Licences . . . . .	523	634	738	814	907
Stamp duties . . . . .	348	422	508	553	870
Postal . . . . .	2,548	3,201	3,543	4,682	5,289
Land revenue . . . . .	653	788	748	832	1,102
Mining receipts . . . . .	41	39	47	72	116
Fees and fines . . . . .	186	248	283	364	459
Health revenue . . . . .	263	300	317	352	464
Forests . . . . .	550	572	640	547	684
Agriculture . . . . .	586	786	1,087	1,015	1,011
Public utilities . . . . .	556	629	905	1,173	1,273
Direct taxation . . . . .	10,182	13,902	15,904	17,187	21,075
Miscellaneous . . . . .	4,576	4,869	5,397	4,614	5,381
Recoverable services . . . . .	2,526	2,883	3,229	5,264	9,862
<i>Total internal revenue</i> . . . . .	<i>35,320</i>	<i>44,190</i>	<i>49,900</i>	<i>(a)55,137</i>	<i>(a)72,442</i>
Territory loans . . . . .	6,157	6,194	8,397	7,183	6,736
Grant by Commonwealth of Australia(b) . . . . .	62,000	69,784	77,594	87,271	97,271
International loans . . . . .	..	..	..	51	1,384
Commonwealth loans . . . . .	..	..	..	..	5,000
Special Loan—Purchase of Equity in Bougainville Copper Ltd . . . . .	..	..	..	..	12,500
Consolidated revenue . . . . .	..	..	..	..	344
<b>Total revenue</b> . . . . .	<b>103,477</b>	<b>120,168</b>	<b>135,892</b>	<b>149,642</b>	<b>195,677</b>
EXPENDITURE					
Special appropriations . . . . .	2,028	2,386	2,785	5,734	5,567
Administrator . . . . .	686	1,082	1,329	1,327	9,278
House of Assembly . . . . .	306	418	420	291	383
Information and extension services . . . . .	645	748	1,001	1,187	1,239
Public Service Board . . . . .	791	1,240	1,270	1,550	1,838
Treasury . . . . .	10,586	10,302	11,576	11,623	3,313
Public health . . . . .	9,554	10,410	11,124	12,217	14,255
Social development and home affairs(c) . . . . .	..	..	..	..	6,953
District administration(d) . . . . .	4,751	5,667	6,012	6,570	..
Labour . . . . .	472	595	632	778	957
Education . . . . .	11,527	13,167	15,062	17,214	21,204
Agriculture, stock and fisheries . . . . .	4,548	5,413	6,427	7,492	8,751
Royal Papua and New Guinea Constabulary . . . . .	2,962	5,239	6,143	6,671	7,965
Law . . . . .	1,524	2,174	2,545	2,930	4,009
Lands, surveys and mines . . . . .	2,306	3,051	3,177	3,270	5,321
Forests . . . . .	1,330	1,625	2,369	2,469	2,677
Posts and telegraphs . . . . .	3,528	4,249	4,750	5,688	7,661
Trade and industry . . . . .	2,435	2,374	2,607	2,826	3,243
Stores for resale . . . . .	1,594	1,535	1,474	1,625	5,677
Public works . . . . .	4,187	4,755	5,740	7,115	8,105
General overheads . . . . .	2,184	2,088	2,291	2,241	2,745
Maintenance . . . . .	8,456	9,402	10,581	12,217	14,046
Capital works . . . . .	19,674	21,221	22,503	21,379	28,215
Other institutions . . . . .	3,702	6,444	8,623	11,498	15,474
Motor transport . . . . .	2,253	2,523	2,792	3,214	3,555
Government printer . . . . .	273	289	312	361	446
Purchase of investments—Bougainville Copper Ltd . . . . .	..	..	..	..	12,500
<b>Total</b> . . . . .	<b>102,303</b>	<b>118,398</b>	<b>(e)133,547</b>	<b>(e)149,485</b>	<b>(e)195,377</b>

(a) From 1 July 1968 refunds of revenue have been deducted from gross collections by items. (b) The annual grants by the Commonwealth of Australia are made to the Territory of Papua and New Guinea. (c) New department established 1969-70: includes former sections of the Department of the Administrator, Department of the Treasury and the former Department of District Administration. (d) Abolished in 1969-70—functions taken over by the Department of the Administrator and the Department of Social Development and Home Affairs. (e) Amount reduced by taxation refunds and refunds of revenue.



### Taxation

The main forms of taxation are income tax and import duties. *Income Tax* was imposed on 1 August 1959 to operate from 1 July 1959. In the case of individuals two different methods of calculating tax payable are used. Tax on taxable incomes has applied since 1 July 1959 and is calculated on a similar basis to that in Australia. The scale of taxation is about 50 per cent of the tax payable on the same taxable income in Australia. Deductions for dependants the taxpayer is maintaining are considerably higher than those allowed in Australia. Tax on chargeable income was introduced to apply from 1 January 1967 and has supplanted a previous *Personal Tax* of \$4 payable by all males eighteen years and over. Chargeable income consists of gross income less expenses directly incurred in earning the income. No deductions are allowable for dependants or any other private expenditure such as medical or education expenses. The tax is a flat rate of 2.00 cents in the \$1 applying on income above \$416 with a maximum of \$20.00. The two methods of calculating tax payable are supplementary, the method applied to any particular taxpayer being the one resulting in the greater amount of tax payable. Companies are taxed on a similar basis to that in Australia, and deductions allowable are generally comparable to those in Australia. From 1 July 1959 to 30 June 1967 the rates on public and private companies differed, public companies being taxed at a flat rate of 20 cents in the \$1 and private companies at 12.5 cents in the \$1 for the first \$10,000 and 17.5 cents in the \$1 for the remainder. From 1 July 1967 a flat rate of 22.5 cents in the \$1 applies to all companies, and from the same date private companies are no longer required to distribute a portion of their income in dividends each year. To encourage industry in the Territory certain companies manufacturing products new to the Territory may be granted complete tax exemption for the first five years of operation under the *Industrial Development (Incentive to Pioneer Industries) Ordinance* 1965–1969. In addition to income taxes the Native Local Government Councils (which are formed voluntarily by the indigenes) are empowered to levy local taxes for the purpose of providing for local services carried out by the councils. These taxes are set off against the taxpayers' personal taxation.

The present *Customs Tariff* provides high revenue rates on imports of ale, spirits, tobacco and cigarettes, timepieces, cigarette papers, fancy goods, and jewellery, but allows entry duty free or at a low rate of duty on most necessities affecting living and building costs. Under the Customs Tariff, plant, machinery and chemicals to be used mainly for industrial and developmental purposes are generally duty-free. A by-law covers goods imported by passengers. No preferential rates are specified in the schedule. Export duties imposed on copra, cocoa, rubber, mother-of-pearl, trochus and burgos shell, and gold were repealed in July 1959.

Effective from 2 September 1970, a general levy of 2½ per cent was imposed, subject to certain exemptions on all goods imported into Papua New Guinea. Exemptions apply in the main to goods imported by the Administration and/or the Australian Government and their statutory authorities, goods imported for the use of charitable organisations and goods used for educational, health or medical services or for scientific research.

This levy, although administered by the Comptroller of Customs is not a Customs Duty and does not affect rates of duty imposed under the Customs Tariff.

Provision is made in the *Australian Customs Tariff* 1966–1970 for the free entry into Australia of certain agricultural goods produced in and imported direct from the Territory (see chapter Overseas Transactions). In addition, goods produced or manufactured in the Territory and imported directly into Australia are exempted from primage duty.

### Banking

The banking system in the Territory of Papua and New Guinea is based on Australia's, and provides full trading and savings bank facilities. Four Australian trading banks have branches in the main centres. They are: the Commonwealth Trading Bank of Australia, the Bank of New South Wales, the Australia and New Zealand Bank and the National Bank of Australasia Ltd. Affiliates or subsidiaries of banking institutions operate savings banks in the Territory. Rates of interest for bank deposits and advances are the same as those applying in Australia. A branch of the Reserve Bank of Australia in Port Moresby carries out central bank functions and acts as banker for the Administration and Commonwealth Government Departments in the Territory. The Territory uses the same currency as Australia.

The Banking (Foreign Exchange) Regulations of the Commonwealth of Australia apply to the Territory of Papua and New Guinea. The Regulations are administered by the Reserve Bank of Australia in a way that is consistent with the policy of encouraging overseas investment in Australia and the Territory. All remittances abroad require exchange control approval, though in practice no restrictions are imposed on current transactions and the trading banks have been authorised to deal with the great majority of these transactions as agents of the Reserve Bank.



The Papua and New Guinea Development Bank which opened in July 1967, has as its prime objective the provision of funds to assist individuals and enterprises in developing the Territory. The Bank was established to provide finance where it was not otherwise available on reasonable terms and conditions. Both indigenes and non-indigenes can qualify for advances. When considering applications the Bank is concerned mostly with the borrower's prospects for success rather than his security.

Average weekly deposits of cheque-paying banks in the Territory of Papua and New Guinea for the year 1969-70 were \$41,906,000 and loans, advances, etc., \$27,207,000. Average weekly debits to customers' accounts amounted to \$21,437,000. Savings banks depositors' balances at 30 June 1970 amounted to \$41,488,000, comprising indigenous \$15,689,000 and non-indigenous \$25,799,000, having increased since June 1959 from \$2,380,000 and \$7,546,000 respectively.

## TERRITORY OF PAPUA

### General description

#### Area, etc.

Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude; its southernmost portion, comprising Tagula and Rossel Islands, lies between 11° S. and 12° S. latitude. It is separated from Australia by Torres Strait. The length of Papua from east to west is upwards of 930 miles; towards either end the breadth from north to south is about 320 miles, but about the centre it is considerably narrower. The Territory includes also the islands of the Trobriand, Woodlark, D'Entrecasteaux, and Louisiade groups. The length of coast-line is estimated at 3,664 miles—1,728 on the mainland and 1,936 on the islands. The total area is 86,100 square miles, of which 83,325 are on the mainland and 2,775 on the islands. A description of the physical characteristics of the Territory appears in earlier issues of the Year Book (*see* No. 18, page 633) and in the Administration Annual Reports.

#### Administration

Particulars of the early administration of Papua are given in Year Book No. 19, page 576. The Territory was placed under the authority of the Commonwealth on 1 September 1906 by proclamation issued in pursuance of Letters Patent of 18 March 1902 and was accepted by the Commonwealth by the *Papua Act* 1905, which came into force by virtue of the aforesaid proclamation. The transfer was made under the authority of Section 122 of the Constitution. The Territory is under the control of the Commonwealth, but not included within it, and is divided into six administrative districts, Southern Highlands, Western, Gulf, Central, Milne Bay, and Northern.

### Population

#### Indigenous population

Within the major division, Melanesian, into which most indigenous inhabitants of the Territory are classified, a distinction may be made between a Melanesian type and a Papuan type, the former representative of the eastern mainland and the island archipelagos to the east and south-east, and the latter representative of the western third and the interior of the Territory. Some negrito traits have been noted in a few of the inland mountain groups. The indigenous population of the Territory of Papua as recorded in the 1966 census is shown on page 990. The estimated indigenous population for 30 June 1970 was 640,064 persons, comprising Central, 129,092; Gulf, 70,456; Milne Bay, 107,179; Northern, 61,141; Southern Highlands, 206,816; and Western, 65,378.

#### Non-indigenous population

The numbers of non-indigenous population from the 1966 census are given on page 990. Separate figures for Papua and for New Guinea are no longer available. The estimated non-indigenous population at 30 June 1970 for Papua and New Guinea was 48,961.

### Land tenure

The basic principles applying to land tenure in Papua are the same as those applying to the whole of the Territory of Papua and New Guinea described on pages 992-3. At 30 June 1970, of the total area of Papua, 22,299,796 hectares, only 789,047 hectares had been alienated. The distribution of alienated land at 30 June 1970 according to tenure was as follows: held by private non-indigenous

inhabitants, freehold 9,826 hectares; leasehold 165,012, land tenure conversion (freehold) 2,422 hectares; native reserves 27,218 hectares; other Administration land, including land reserved for public purposes, 584,569 hectares. Land held in accordance with native custom may be converted to freehold tenure under the *Land (Tenure Conversion) Ordinance* 1963–1968.

Although a small amount of freehold land exists in Papua, present legislation does not provide for the granting of estates in freehold. Leases of various kinds may be granted by the Administration. The principal types of leases available are agricultural leases, pastoral leases, town subdivision leases, business leases and residence leases of other than town allotments, and various forms of special leases and licences over land. Leasehold terms are liberal, and, in general, leases may be granted for periods of up to ninety-nine years. Rent is based on the unimproved value of the land.

Leases of Crown land are granted by the Administrator following a land use examination, advertisement of leases available, and consideration of applications by the Land Board. Dealings in privately-owned land are a matter for private treaty. Native-owned land, however, cannot be acquired or leased from the native owners by private individuals. The Administration alone may purchase native-owned land, and then only if the owners are willing to sell and the Administration is satisfied that the owners do not require, and are not likely to require, the land.

The registration of titles, interest and dealings in alienated land is provided for under the *Real Property Ordinance* 1913–1969, modelled on the Torrens system of land registration.

## Production

### Primary production

The products of the Territory are obtained principally from its agricultural, forestry, mining, and fishing industries. Indigenous subsistence agriculture, fishing and hunting produce most of the food requirements of the indigenous population. The main indigenous agricultural products are taro, yams, sweet potatoes, bananas, and papaws. Peanuts are becoming of increasing importance in the indigenous diet. Non-indigenous enterprise produces most of the commodities exported. Indigenous, however, produce copra for export, while indigenous enterprise in other fields of agricultural production for export purposes, e.g. cocoa and coffee, is undertaken. The principal agricultural products of Papua for the export trade are copra and rubber. Indigenous production of copra is increasing. The fishing industry is also of increasing importance. Gold, silver, manganese, zinc-lead, and copper ores have been mined in commercial quantities in the past, but current production is limited to gold and silver.

For information on the agricultural, fisheries and animal industries, see pages 992–7 which for the sake of convenience covers the Territories of Papua and New Guinea singly and combined. The following paragraphs relate to forestry, mining, fisheries, and water-power resources in Papua.

### Forestry

A general description of the forestry policy in Papua and New Guinea is given on pages 995–6.

Tropical rain forest covers most of Papua, although near Port Moresby there is an area of savannah country. Because of the mixed nature of the timbers in any one area, their utilisation on an economical basis is difficult. Mangroves occur in large areas fringing the Gulf of Papua. Forestry field work is carried out in Papua with a view to assessing the forest resources available and also to survey areas subsequently made available for cutting.

### Mining

Although a large number of minerals have been found in Papua, including platinum, gold, silver, copper, tin, lead, zinc, cinnabar, iron, osmiridium, manganese, sulphur, chromite, gypsum, and lignite, current mineral production is not of economic importance. Before the 1939–45 War gold was an important item in Papuan production, but it has since dwindled to insignificance. Large quantities of copper ore were mined and exported up to 1940. A large low grade copper ore body is being investigated in the Star Mountains, near the West Irian border. Extensive deposits of magnetite sands exist along the Gulf of Papua coastline, but these contain the undesirable impurity titanium, and ways of separating this from magnetite are under investigation. The *Mining Ordinance* 1937–1966 and the *Mining Development Ordinance* 1955–1960 control mining in Papua.

Indications of oil have been found at scattered locations over a large area, but commercial quantities have not been discovered. Natural gas has been found in several wells in the Gulf District (including offshore), but its commercial use is not yet economically feasible. At 30 June 1971 thirty-one permits and licences were effective under the provisions of the *Petroleum (Prospecting and Mining) Ordinance* 1951–1968 and the *(Commonwealth) Petroleum (Submerged Lands) Act* 1967–1968.

**Fisheries**

The fishing industry in Papua is considered to have considerable potential. In 1968-69 the most important export from Papua and New Guinea was 258,395 lb of frozen crayfish tails and prawns from the north coast of Papua, valued at \$268,181. Exports of barramundi to Australia are also important. Two large international firms are operating commercial prawn fishing ventures.

Two cultured pearl farms have recently commenced production of both round and half pearls of high quality.

**Water power**

Most of the rivers in Papua carry a large volume of water from a great height over a relatively short distance, thereby offering opportunities for the installation of hydro-electric power plants. It is estimated that at least 1,850 MW could be developed.

For further details, see Chapter 24, Water Conservation and Irrigation and Chapter 28, Electric Power Generation and Distribution.

**TRUST TERRITORY OF NEW GUINEA****General description****Area, etc.**

The Trust Territory of New Guinea extends almost from the equator to latitude 8° S., a distance of 400 nautical miles, and from longitude 141° E. to 160° E., a distance of 1,000 nautical miles. The land area is 92,160 square miles, that of the New Guinea mainland being 69,095 square miles and that of adjacent islands, including the two northernmost islands of the Solomon Islands, Buka and Bougainville, and the Bismarck Archipelago, 23,065 square miles. Information regarding physiography and climate will be found in Year Book No. 22, page 613, in the *Official Handbook of the Territory of New Guinea*, and the Administration Annual Reports.

**Administration**

The terms of the League of Nations mandate (1920) of the former German possession of New Guinea are given in Year Book No. 33 (see page 264). Particulars of the administration of the Territory of New Guinea prior to the setting-up of the Papua and New Guinea Administration are given in Year Book No. 36 and earlier issues, and of events following the outbreak of the Pacific War in Year Book No. 37 and subsequent issues up to No. 48.

Following the 1939-45 War the Commonwealth Government undertook to place the Territory of New Guinea under the Trusteeship System established under the Charter of the United Nations. The Trusteeship Agreement for the Territory, under which the Government of Australia is the sole administering authority, was approved by the General Assembly of the United Nations Organisation on 13 December 1946. The terms of the Agreement are shown in Year Book No. 39, pages 355-7.

For administrative purposes the Territory is divided into the following twelve districts: East New Britain and West New Britain, comprising New Britain and the adjacent islands; Morobe, Madang, Eastern Highlands, Chimbu (major part), Western Highlands, East Sepik and West Sepik on the mainland; New Ireland, comprising New Ireland, Lavongai and adjacent islands; Manus, comprising the Admiralty Group; and Bougainville in the Solomon Islands. Each district is administered by a District Commissioner.

**Population****Indigenous population**

The indigenous people of the Territory may in general be grouped with the Melanesians who occupy the greater part of the Western Pacific. They may be divided into two main types—Melanesian and Papuan—the former, with a few exceptions, constituting the population of the Bismarck Archipelago, the Solomon Islands and the coastal districts of the New Guinea mainland, the latter inhabiting the interior of the mainland. Some tribes of Negritos exist in the mountains of New Guinea. There is a strain of Papuan, and, possibly, of Polynesian blood in the Admiralty Islanders, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians. (See Year Book No. 16, page 670, and *Official Handbook of the Territory of New Guinea*, Part V.)



The indigenous population of the Territory at the Census of 30 June 1966 is shown on page 990. At 30 June 1970 the estimated indigenous population was 1,772,744 persons, comprising Bougainville, 77,793; Eastern Highlands, 288,617; Chimbu, 185,295; Western Highlands, 331,299; Madang, 177,307; Manus, 21,951; Morobe, 244,956; East New Britain, 98,597; West New Britain, 55,171; and New Ireland, 50,623.

### Non-indigenous population

The non-indigenous population of the Territory of New Guinea at the 1966 Census is shown on page 990. Separate figures for Papua and for New Guinea are no longer available. The estimated non-indigenous population at 30 June 1970 for Papua and New Guinea was 48,961.

## Land tenure

The principles governing the acquisition and ownership of land and types of tenure available in New Guinea are in general similar to those which obtain in Papua, and grants of estates are restricted to leasehold tenure. In New Guinea, however, the amount of freehold land of earlier origin held by private non-indigenous owners amounts to more than half a million acres. Freehold titles to this land, which includes a good deal of plantation land, may be transferred by purchase, subject only to the general provision that dealings in land require the approval of the Administrator.

The area of the Territory of New Guinea is estimated at approximately 23,869,237 hectares, of which at 30 June 1970 only 776,354 hectares were alienated. The following was the distribution of alienated land according to tenure at 30 June 1970: held by private non-indigenous inhabitants—freehold land under tenure conversion, 207,012 hectares; leasehold 205,849 hectares; native reserves 10,852 hectares; other Administration land, including land reserved for public purposes 351,528 hectares. Land held in accordance with native custom may be converted to freehold tenure under the *Land (Tenure Conversion) Ordinance 1963–1968*.

Under German law there was a system of registration of titles in a Ground Book, but registration did not necessarily confer an indefeasible title. The German system has been replaced by one modelled on the Torrens plan, embodied in the *Lands Registration Ordinance 1924–1969*. The land registers were lost during the 1939–45 War, but provision for restoration of the lost titles is made in the *New Guinea Land Titles Restoration Ordinance 1951–1968*.

## Production

The products of New Guinea are obtained principally from its agricultural, mining, fishing, and forestry industries. A copra crushing mill near Rabaul, established in 1952, commenced crushing at about 18,000 tons of copra per annum, and its capacity is now about 60,000 tons of copra per annum. Early in 1968 a factory capable of manufacturing 7,000 tons of desiccated coconut a year was established also near Rabaul. At Bulolo a company is producing high quality moisture-proof plywood in a factory with an approximate annual plywood production of 38 million square feet (on a  $\frac{3}{8}$  in. basis). Indigenous subsistence agriculture, fishing and hunting produce most of the food requirements of the indigenous population. The main indigenous agricultural products are taro, yams, sweet potatoes, coconuts, bananas, papaws. Non-indigenous enterprise produces most of the commodities exported. Indigenous, however, produce copra for export, and in recent years have taken up the production of introduced crops such as peanuts, rice, cucurbits, and maize for their own consumption and coffee, cocoa, tea, passionfruit, pyrethrum and palm oil for export. The principal agricultural products of New Guinea for the export trade are copra and coconut oil, cocoa, and coffee, but exports of timber and timber products are substantial and the export of tea is increasing. Subsistence fishing is widely practised. In the past the principal exports of marine produce have been marine shell, crocodile skins and barramundi. In the future substantial exports of tuna, prawns, and cultured pearls are expected.

For information on the agricultural, fisheries and animal industries, which for the sake of convenience covers the Territories of Papua and New Guinea singly and combined, see pages 992–7. The following paragraphs relate to the timber, and mining industries in the Territory of New Guinea alone.

### Forestry

A general description of the forestry policy in Papua and New Guinea is given on pages 995–6.



### Mining

The production of gold and associated silver is the most important mining activity in New Guinea, although other minerals, such as osmiridium, platinum, copper, iron ore, sulphur, and brown coal, have been discovered. The production of gold in New Guinea since the 1939–45 War has been on a much smaller scale than before the war, decreasing from \$1,410,000 in 1959–60 to \$797,155 in 1969–70.

A large low grade copper deposit with ore reserves of 900 million tons of ore containing 0.48 per cent copper and 0.36 dwt per ton gold is being developed by Bougainville Copper Pty Ltd a partly owned subsidiary of Conzinc Rio Tinto Australia Ltd with a 20 per cent shareholding by the Administration. Beginning in mid 1972, ore is expected to be mined at the rate of 30 million tons per annum to produce concentrates containing some 150,000 tons of copper, 510,000 oz of gold and 1,000,000 oz. of silver for export.

The laws in operation governing mining are the *Mining Ordinance* 1928–1966, the *Mines and Works Regulation Ordinance* 1935–1962 and the *Mining Development Ordinance* 1955–1960 and the regulations made thereunder.

The *Petroleum (Prospecting and Mining) Ordinance* 1951–1968 deals with the issue of permits and the granting of licences and leases for oil exploration. There were six permits and licences for oil current at June 1971.

### Water power

The International Bank for Reconstruction and Development has granted a \$20.7 million loan for the development of the first stage of the Upper Ramu Hydro-electric Scheme. For details, see Chapter 28, Electric Power Generation and Distribution.

## HEARD ISLAND AND McDONALD ISLANDS

These islands, about 2,500 miles south-west of Fremantle, were transferred from the United Kingdom to Australia as from 26 December 1947. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard Island and McDonald Islands by the *Heard and McDonald Islands Act* 1953. In 1968, the responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply.

In December 1947 an Australian scientific station was established on Heard Island, and meteorological investigations were conducted until the station was closed in March 1955 following the establishment of Mawson station on the Antarctic mainland. Australian expeditions have since visited the island from time to time. Heard Island is about twenty-seven miles long and thirteen miles wide. The McDonald Islands are twenty-six miles to the west of Heard Island. They are small, rocky and precipitous. The first known landing on McDonald Island, the largest of the group of the same name, took place on 27 January 1971 when two members of the Australian National Antarctic Research Expeditions (ANARE) paid a short visit on their way to the Heard Island Station.

## AUSTRALIAN ANTARCTIC TERRITORY

An Imperial Order in Council of 7 February 1933 placed under Australian authority all the islands and territories other than Terre Adélie situated south of 60° S. latitude and lying between 160° E. longitude and 45° E. longitude. The Order came into force with a Proclamation issued by the Governor-General on 24 August 1936 after the passage of the *Australian Antarctic Territory Acceptance Act* 1933. The boundaries of Terre Adélie were definitively fixed by a French Decree of 1 April 1938 as the islands and territories south of 60° S. latitude lying between 136° E. longitude and 142° E. longitude. The *Australian Antarctic Territory Act* 1954 declared that the laws in force in the Australian Capital Territory are, so far as they are applicable and are not inconsistent with any ordinance made under the Act, in force in the Australian Antarctic Territory. In 1968, responsibility for the administration of this Act was transferred from the Minister for External Affairs to the Minister for Supply.

On 13 February 1954 the Australian National Antarctic Research Expeditions (ANARE) established a station on Mac-Robertson Land at latitude 67° 36' S. and longitude 62° 53' E. The station was named Mawson in honour of the late Sir Douglas Mawson and was the first permanent Australian station to be set up on the Antarctic continent. Meteorological and other scientific research is conducted at Mawson, which is the centre for coastal and inland survey expeditions.

A second Australian scientific research station was established on the coast of Princess Elizabeth Land on 13 January 1957 at latitude 68° 35' S. and longitude 77° 58' E. The station was named Davis in honour of the late Captain John King Davis of Melbourne, who commanded a number of famous Antarctic ships. The station was temporarily closed down in January 1965 and reopened in February 1969. In February 1959 the Australian Government accepted from the United States Government custody of Wilkes Station, which was established by the United States on 16 January 1957 on Vincennes Bay, at latitude 66° 15' S. and longitude 110° 32' E. The station was named in honour of Lieut Charles Wilkes, who commanded the 1838–42 United States expedition to the area. Wilkes ceased operations early in April 1969. A new station of advanced design, built about 1½ miles south of Wilkes, was opened in February 1969 and named Casey in honour of Lord Casey, who has had a long association with Antarctic Expeditions.

On 1 December 1959 Australia signed the Antarctic Treaty with Argentina, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the U.S.S.R., the United Kingdom, and the United States of America. Poland, Czechoslovakia, Denmark and the Netherlands have subsequently acceded to the Treaty. The Treaty reserves the Antarctic area south of 60° S. latitude for peaceful purposes, provides for international co-operation in scientific investigation and research, and preserves, for the duration of the Treaty, the *status quo* with regard to territorial sovereignty, rights and claims. The Treaty entered into force on 23 June 1961. Since then the Antarctic Treaty powers have held six consultative meetings under the Treaty, the first at Canberra in July 1961, the second at Buenos Aires in July 1962, the third at Brussels in June 1964, the fourth at Santiago in 1966, the fifth in Paris in 1968 and the sixth in Tokyo 1970. The seventh is to be held in Wellington in 1972.

## COCOS (KEELING) ISLANDS

### General description

The Cocos (Keeling) Islands, two separate atolls comprising some twenty-seven small coral islands with a total area of about 5½ square miles, are situated in the Indian Ocean in latitude 12° 5' S. and longitude 96° 53' E. They lie some 1,720 miles north-west of Perth and 2,290 miles almost due west of Darwin, while Johannesburg is some 3,800 miles further distant to the south-west and Colombo is 1,400 miles to the north-west of the group.

The main islands of the Territory are West Island, the largest, about six miles from north to south, on which are the aerodrome and most of the European community; Home Island, the headquarters of the Clunies-Ross Estate; Direction Island; South Island; and Horsburgh Island. North Keeling Island, which forms part of the Territory, lies about fifteen miles to the north of the groups and has no inhabitants.

Main settlements are on West Island and Home Island. The group of atolls is low-lying, flat and thickly covered by coconut palms, and surrounds a lagoon which has a harbour in the northern part but which is extremely difficult for navigation.

The climate is equable and pleasant, usually being under the influence of the south-east trade winds for about three-quarters of the year. However, the winds vary at times, and meteorological reports from the Territory are particularly valuable to those engaged in forecasting for the eastern Indian Ocean. The temperature varies between 70° and 89° F., and the average rainfall is about 67 inches. There are occasional violent storms. The estimated population at 30 June 1970 was 611 (308 males and 303 females).

### History and administration

Summarised particulars of the discovery of the islands and their history up to 1946, when they became a dependency of the Colony of Singapore, are given in Year Book No. 51, page 140, and in earlier issues. On 23 November 1955 the Cocos Islands ceased to form part of the Colony of Singapore and were placed under the authority of the Commonwealth of Australia. The transfer was effected by an Order in Council made by Her Majesty Queen Elizabeth the Second under the Imperial Act entitled the Cocos Islands Act 1955 and by the *Cocos (Keeling) Islands Act 1955* of the Commonwealth whereby the islands were declared to be accepted by the Commonwealth as a Territory under the authority of the Commonwealth, to be known as the Territory of Cocos (Keeling) Islands.

Responsibility for the administration of the Territory rests with the Minister for External Territories. The first Official Representative was appointed on 23 November 1955 to take charge of the local administration of the Territory. Under the *Official Representative Ordinance 1955–1961* of the Territory, the Official Representative is given such powers and functions in relation to the Territory as are delegated to him by the Minister under the *Cocos (Keeling) Islands Act 1955–1966* or are otherwise conferred on him under that Act or by or under any other law of the Territory. The laws of

the Colony of Singapore which were in force in the islands immediately before the date of the transfer were, with certain exceptions, continued in force by the *Cocos (Keeling) Islands Act* 1955-1966. They may be amended or repealed by Ordinances made under the provisions of that Act which empower the Governor-General to make Ordinances for the peace, order and good government of the Territory.

#### Transport and communication

There is an international airport at West Island under the control of the Commonwealth Department of Civil Aviation. A fortnightly air service is provided between Perth and the Cocos Islands by Ansett and T.A.A. alternately. Although there is no regular shipping service, vessels from Australia and Singapore call at intervals. A radio teletype link with Perth is maintained by the Administration. Local postal and telephone services exist, and a non-commercial broadcasting station operates.

### CHRISTMAS ISLAND

Christmas Island is an isolated peak situated in the Indian Ocean in latitude 10° 25' 22" S., longitude 105° 39' 59" E. It is approximately 224 miles south from Java Head at the south entrance to Sunda Strait, 815 miles from Singapore and 1,630 miles from Fremantle. Christmas Island covers an area of about fifty-two square miles. It consists of a central plateau of about 600 to 800 feet with several prominent rises up to 1,170 feet. The plateau descends to the sea in a series of steep slopes alternating with terraces, the last dropping in a cliff of 200 to 300 feet to a shore terrace, terminating in a sea cliff of 10 to 150 feet, which is continuous round the island except in a few places, the chief of which is Flying Fish Cove, where the principal settlement is located and which is also the only known anchorage.

The climate is healthy and pleasant, and the prevailing winds come from the south-east to east-south-east from May to December, but from then to April (the wet season) they occasionally shift round to between north and west. The average yearly rainfall is about 80 inches with a marked summer incidence. The porous nature of the ground prevents the formation of pools of water, but there are several good springs which maintain an adequate supply of fresh water for the small population and the installations. The mean average temperature is about 80° and does not vary greatly throughout the year.

The economy of the Territory is based almost entirely on the mining and extraction of phosphate. Because of the nature of the land there appears little prospect of establishing any other economic activity.

At 30 June 1970 the estimated population was 3,361 (2,208 males and 1,153 females).

#### Education

The Christmas Island education system comprises a primary school and a secondary school: following the Singapore curriculum, a primary school following an Australian curriculum and a technical training centre. The Singapore curriculum schools provide classes to Form 4 level and scholarships are available for students wishing to proceed to Singapore for education beyond that level.

At 30 June 1970, 693 children were enrolled at the primary and secondary schools following the Singapore curriculum. The combined staff establishment consisted of a headmaster, two senior teachers, 25 class teachers and two trainee teachers. The Australian curriculum primary school had 66 pupils at 30 June 1970, with teachers seconded from the Western Australian Department of Education. The Technical Training Centre, which opened in 1969, had a total enrolment of 259 at 30 June 1970.

#### History and administration

Summarised particulars of the history of Christmas Island up to its administration by the United Kingdom as a separate Crown Colony from 1 January 1958, pending transfer to Australia, are given in Year Book No. 51, page 141, and in earlier issues. On 1 October 1958 the island was transferred to the Commonwealth of Australia by the *Christmas Island Act* 1958 and is now administered as a Territory under the authority of the Commonwealth. Responsibility for the administration and government of the Territory rests with the Minister for External Territories, and day to day affairs on the island are administered by an Administrator under delegation from the Minister. The laws which were in force on the island at 30 September 1958 were continued as the laws of the Territory after its transfer to Australia.



**Phosphate deposits**

The only commercial activity carried out is the mining of phosphate. The British Phosphate Commissioners act as managing agents for the Christmas Island Phosphate Commission. There are three principal phosphate deposits on the islands, of which the largest is that now being worked at South Point. This field is situated on the 600 feet to 800 feet level and is approximately 12 miles from the drying and shipping plant at Flying Fish Cove. During 1969-70, 989,049 tons of phosphate were exported to Australia and New Zealand. In addition 92,323 tons of phosphate dust were exported to South-east Asia and Australia.

**Transport and communication**

Transport to and from the island is maintained by vessels operated under charter by the Christmas Island Phosphate Commission. One vessel makes regular trips between Christmas Island and Singapore, and other vessels carry phosphate to Australian ports and New Zealand.

A post office and internal telephone system are operated by the Administration. The latter comprises four automatic exchanges and three small subscriber-attended exchanges. A radio station is used for messages via Perth and Singapore and for communication with ships at sea. A limited broadcasting station commenced operating during 1966-67.



## CHAPTER 30

### MISCELLANEOUS

This chapter comprises statistics and other descriptive information not directly related to the subjects of the preceding chapters, or which it is convenient to assemble in single sections, arranged as follows: Valuation of Australian production; Indexes of farm production; Consumption of foodstuffs and beverages; Internal trade (retail and wholesale trade); Interstate trade; Statistical organisation in Australia; Statistical and other official publications of Australia.

#### VALUATION OF AUSTRALIAN PRODUCTION

The value of production for Australia is computed in accordance with the decisions reached at the Conferences of Australian Statisticians and principally at the Conference held in 1935. The figures published in the following tables have been compiled by the Statisticians in the various States from the latest and best data available and are on a substantially uniform basis. However, marketing costs are not on a completely comparable basis between States and, in addition, accurate information is difficult to obtain for many items. In consequence, differences between States in the relationships of local to gross value should be treated with some reserve.

Attention is directed to the fact that the values shown in this section exclude the building and construction industry, those industrial establishments not classified as factories, and certain agricultural and farmyard produce obtained from areas of less than one acre. As explained in the chapter Manufacturing Industry, pages 712-5, factory statistics for 1968-69 are not comparable with earlier series and therefore have not been included. Statistics for factories and mining for 1969-70 are not yet available.

#### Explanation of terms used

The following is a brief explanation of the terms used.

- (a) *Gross value of production* is the value placed on recorded production at the wholesale price realised at the principal markets. In general, the 'principal markets' are the metropolitan markets in each State. In cases where primary products are consumed at the place of production or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets.
- (b) *Local value* (i.e. gross production valued at the place of production) is ascertained by deducting marketing costs from the gross value. Marketing costs include freight, cost of containers, commission, and other charges incidental thereto.
- (c) *Net value of production* represents local value less value of materials used in the process of production. Materials used in the process of production include seed, power, power kerosene, petrol and other oils, fodder consumed by farm stock, manures, dips, sprays, and other costs. No deductions have been made for depreciation or certain maintenance costs, as particulars are not available for all States. The net value of production is the only satisfactory measure to use when comparing or combining the value of primary industries with those of other industries.

For the years shown in the following tables, no allowance for power, power kerosene, petrol, and other oils has been made in New South Wales. In the case of the mining and quarrying industry, however, this allowance has been made in all States. Marketing costs for mining and quarrying and costs of materials used in the process of production in respect of bee-farming, hunting, forestry, and fisheries are not available for all States. Local values have been used for these industries, with consequent understatement in gross value for the mining and quarrying industry and overstatement in net value for the other industries. Because of revisions, some figures may differ from corresponding figures in earlier chapters of this Year Book.

## Value of production, Australia

## GROSS, LOCAL AND NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES (EXCLUDING MINING): AUSTRALIA 1969-70

(\$'000)

<i>Industry</i>	<i>Gross production valued at principal markets</i>	<i>Local value—gross production valued at place of production</i>	<i>Net value of production (without deduction of depreciation or maintenance)</i>
Agriculture . . . . .	1,500,700	1,215,139	1,008,741
Pastoral . . . . .	1,541,632	1,407,684	1,204,444
Dairying . . . . .	547,239	512,397	418,877
Poultry . . . . .	187,710	168,632	84,515
Bee-farming . . . . .	4,824	4,398	(a)4,398
<i>Total, rural . . . . .</i>	<i>3,782,103</i>	<i>3,308,251</i>	<i>2,720,976</i>
Forestry . . . . .	127,110	117,238	(a)117,238
Fishing . . . . .	62,942	58,118	(a)58,118
Hunting . . . . .	12,548	11,232	(a)11,232
<i>Total, forestry, fishing and hunting . . . . .</i>	<i>202,600</i>	<i>186,589</i>	<i>186,589</i>
<i>Total, all primary (excluding mining) . . . . .</i>	<i>3,984,703</i>	<i>3,694,840</i>	<i>2,907,565</i>

(a) Local value.

## Net value of production

## NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES (EXCLUDING MINING) STATES AND TERRITORIES, 1969-70

(\$'000)

<i>Industry</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
Agriculture . . . . .	312,670	232,421	219,888	133,474	84,182	24,736	896	474	1,008,741
Pastoral . . . . .	373,033	307,734	230,126	117,337	132,610	24,226	17,658	1,720	1,204,444
Dairying . . . . .	119,956	187,340	50,667	28,188	9,850	22,358	153	365	418,877
Poultry . . . . .	39,561	25,409	7,904	3,760	4,673	2,729	240	239	84,515
Bee-farming(b) . . . . .	1,606	821	299	939	614	107	..	12	4,398
<i>Total, rural . . . . .</i>	<i>846,826</i>	<i>753,725</i>	<i>508,884</i>	<i>283,699</i>	<i>231,929</i>	<i>74,157</i>	<i>18,947</i>	<i>2,809</i>	<i>2,720,976</i>
Forestry(b) . . . . .	36,832	27,939	13,081	10,501	12,795	15,572	53	465	117,238
Fishing(b) . . . . .	11,504	4,961	7,609	7,186	19,536	3,343	3,979	..	58,118
Hunting(b) . . . . .	4,097	2,884	2,229	930	770	283	39	..	11,232
<i>Total, forestry, fishing and hunting . . . . .</i>	<i>52,433</i>	<i>35,784</i>	<i>22,919</i>	<i>18,617</i>	<i>33,102</i>	<i>19,198</i>	<i>4,071</i>	<i>465</i>	<i>186,589</i>
<i>Total, all primary (excluding mining) . . . . .</i>	<i>899,259</i>	<i>789,509</i>	<i>531,803</i>	<i>302,316</i>	<i>265,031</i>	<i>93,355</i>	<i>23,018</i>	<i>3,274</i>	<i>2,907,565</i>

(a) See text on page 1013. (b) Local value.

**NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES (EXCLUDING MINING) PER  
HEAD OF POPULATION STATES, 1969-70**  
(**\$**)

<i>Industry</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(b)</i>
Agriculture . . .	69.03	67.97	123.14	115.56	87.22	63.29	81.07
Pastoral . . .	82.36	89.99	128.87	101.59	137.39	61.99	96.80
Dairying . . .	26.49	54.78	28.37	24.40	10.21	57.21	33.66
Poultry . . .	8.73	7.43	4.43	3.26	4.84	6.98	6.79
Bee-farming(c) . . .	0.35	0.24	0.17	0.81	0.64	0.27	0.35
<i>Total, rural . . .</i>	<i>186.97</i>	<i>220.42</i>	<i>284.98</i>	<i>245.61</i>	<i>240.30</i>	<i>189.75</i>	<i>218.68</i>
Forestry(c) . . .	8.13	8.17	7.33	9.09	13.26	39.84	9.42
Fishing(c) . . .	2.54	1.45	4.26	6.22	20.24	8.55	4.67
Hunting(c) . . .	0.90	0.84	1.25	0.81	0.80	0.72	0.90
<i>Total, forestry, fish- ing and hunting . . .</i>	<i>11.58</i>	<i>10.46</i>	<i>12.83</i>	<i>16.12</i>	<i>34.30</i>	<i>49.12</i>	<i>15.00</i>
<i>Total, all primary (excluding mining)</i>	<i>198.55</i>	<i>230.88</i>	<i>297.81</i>	<i>261.73</i>	<i>274.59</i>	<i>238.87</i>	<i>233.67</i>

(a) See text on page 1013.

(b) Includes Northern Territory and Australian Capital Territory.

(c) Local value.

**NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES, MINING  
AND FACTORIES: AUSTRALIA, 1965-66 TO 1969-70**  
(**\$'000**)

<i>Industry</i>	<i>1965-66</i>	<i>1966-67</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>
Agriculture . . .	857,913	1,209,003	899,425	1,213,221	1,008,741
Pastoral . . .	1,159,500	1,181,848	1,044,436	1,194,994	1,204,444
Dairying . . .	349,853	371,939	371,306	381,152	418,877
Poultry . . .	62,636	69,908	64,151	71,209	84,515
Bee-farming(b) . . .	3,515	3,278	3,806	2,589	4,398
<i>Total, rural . . .</i>	<i>2,433,414</i>	<i>2,835,976</i>	<i>2,383,122</i>	<i>2,863,165</i>	<i>2,720,976</i>
Forestry(b) . . .	110,756	108,716	109,759	110,216	117,238
Fishing(b) . . .	41,725	44,574	54,003	58,592	58,118
Hunting(b) . . .	13,824	11,948	10,547	10,564	11,232
<i>Total, forestry, fish- ing and hunting . . .</i>	<i>166,305</i>	<i>165,238</i>	<i>174,309</i>	<i>179,372</i>	<i>186,589</i>
<i>Total, all primary</i>	<i>2,599,719</i>	<i>3,001,215</i>	<i>2,557,432</i>	<i>3,042,537</i>	<i>2,907,565</i>
Mining and quarrying(c)	443,853	514,534	568,065	701,627	(d)
Factories . . .	6,251,861	6,877,001	7,430,853	(d)	(d)
<i>Grand total . . .</i>	<i>9,295,433</i>	<i>10,392,750</i>	<i>10,556,350</i>	<i>(d)</i>	<i>(d)</i>

(a) See text on page 1013.

(b) Local value.

(c) Year ended 31 December of first year shown.

(d) Not available, for explanation see Chapter 22 Manufacturing Industry, page 715 and Chapter 27 Mineral Industry, page 915.

## INDEXES OF FARM PRODUCTION

In the first two tables in this section indexes of price and quantum (i.e. value at constant prices) of production are given for the following industrial groups: Agriculture, Pastoral, Dairying, poultry and bee-farming, and All farming combined (including separate indexes for wheat, wool and milk). In the third table indexes of quantum (i.e. value at constant prices) of production, exports and consumption of farm products for food use are shown.

**Farm production price indexes**

The farm production price indexes shown in the following table relate to average 'prices' of agricultural, pastoral, dairying, poultry and bee-farming products realised at the principal markets of Australia. The 'price' data used are average unit values for the total quantities of the relevant commodities produced or marketed in each year, and the index numbers therefore measure both the effects of changes in prices (as such) and of variations in the quality, type, usage, etc. of products marketed. The index numbers for any year relate to the average values of products produced or marketed in that year irrespective of the periods in which payment is received by producers.

The indexes have been calculated by the fixed-base weighted aggregative method. 'Prices' for each commodity in any year are obtained by dividing gross value of production by the quantity produced in that year. In the original published series of Production Price Index Numbers the average quantities of the relevant commodities *produced* in the period 1923-24 to 1927-28 were used as fixed weights. This series, re-computed to the base average 1936-37 to 1938-39 = 100, was published in earlier issues of the Year Book (*see* No. 43, page 1050). For 1936-37 and later years the original series was replaced in December 1952 by a revised series in which average quantities of each product *marketed* during the period 1946-47 to 1950-51 were used as fixed weights. In the revised series the regimen was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were also incorporated in the revised indexes, the principal of which was the omission from the weights used for the All farming index of quantities of crops marketed for livestock feeding in Australia.

**FARM PRODUCTION: INDEXES OF PRICES AT PRINCIPAL MARKETS, AUSTRALIA  
1955-56 TO 1969-70**

(Base: Average of 3 years ended June 1939 = 100)

Year	Agriculture		Pastoral		Dairying, poultry and bee-farming		All farming	
	Wheat	Total	Wool (shorn and dead)	Total	All milk	Total	Products other than wool	Total
1955-56	319	330	468	451	380	392	373	397
1956-57	347	336	607	536	365	386	374	432
1957-58	339	336	473	435	375	382	359	388
1958-59	337	322	370	396	372	386	369	369
1959-60	350	329	440	464	383	402	391	403
1960-61	355	349	397	443	384	402	403	401
1961-62	380	348	412	421	373	373	376	385
1962-63	366	334	449	450	380	388	378	396
1963-64	356	351	531	511	382	402	398	431
1964-65	351	351	437	460	403	423	408	415
1965-66	372	354	458	501	395	422	423	431
1966-67	366	350	433	496	388	418	425	427
1967-68	397	371	382	457	380	413	429	417
1968-69	337	334	408	488	391	424	424	420
1969-70	359	348	343	451	393	427	434	411

**Indexes of quantum (i.e. value at constant prices) of farm production**

The indexes shown in the following table relate to gross output of farm products valued at constant prices. They have been calculated by revaluing quantities of each farm product included in the indexes at the average unit gross value of each product for the base years.

In the original published series the period 1923-24 to 1927-28 was adopted as the base for revaluing each farm product. This series, re-computed to the base: average 1936-37 to 1938-39 = 100, was published in earlier issues of the Year Book (*see* No. 43 page 1051). For 1936-37 and later years the original series was replaced in December 1952 by a revised series in which average unit values for the period 1936-37 to 1938-39 were used. The regimen used for the revised series was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were incorporated in the revised indexes, the principal of which was the omission, in calculating the All farming index, of quantities of crops fed to livestock in Australia.



**INDEXES OF QUANTUM<sup>(a)</sup> OF FARM PRODUCTION: AUSTRALIA  
1955-56 TO 1969-70**

*(Base: Average of 3 years ended June 1939 = 100)*

Year	Agriculture		Pastoral		Dairying, poultry and bee-farming		All farming	
	Wheat	Total	Wool (shorn and dead)	Total	All milk	Total	Products other than wool	Total
1955-56	119	134	146	136	123	120	127	131
1956-57	82	120	164	148	119	117	121	131
1957-58	59	109	148	142	111	114	116	124
1958-59	131	165	164	159	120	119	145	149
1959-60	121	140	172	163	123	123	136	144
1960-61	166	177	165	152	116	120	148	152
1961-62	150	163	174	160	125	128	150	155
1962-63	186	191	170	163	129	129	165	166
1963-64	199	196	183	172	131	131	171	174
1964-65	224	218	183	172	132	136	180	181
1965-66	158	184	169	163	133	138	165	166
1966-67	283	265	180	167	140	145	205	199
1967-68	168	189	180	174	132	141	173	175
1968-69	330	292	199	186	133	143	219	215
1969-70	235	242	208	199	146	155	206	207

<sup>(a)</sup> Indexes of value at constant prices, i.e. quantities revalued at average unit values of the base years (see text preceding table).

**Farm products for food use: indexes of quantum (i.e. value at constant prices) of production, exports and consumption**

The indexes shown in the following table have been calculated by revaluing quantities of each farm product included in the indexes at the average unit gross value of each product for the years 1936-37 to 1938-39. The items included comprise products in the form in which they are sold from farms in all cases except livestock sold for slaughter for meat, which are included in terms of dressed carcass weight of meat. Quantity data relating to exports include exports of processed food in terms of farm product equivalent. The indexes of production relate basically to gross output of farm products for food use, including crops exported for stock-feeding overseas.

**FARM PRODUCTS FOR FOOD USE: INDEXES OF QUANTUM<sup>(a)</sup> OF  
PRODUCTION, EXPORTS AND CONSUMPTION  
AUSTRALIA, 1955-56 TO 1969-70**

*(Base: average of 3 years ended June 1939 = 100)*

Year	Production		Exports		Consumption in Australia	
	Total	Per head of total population	Total	Per head of total population	Total	Per head of total population
1955-56	129	95	131	97	131	97
1956-57	123	88	118	85	136	98
1957-58	115	81	90	64	139	98
1958-59	146	101	137	94	142	98
1959-60	138	93	132	89	145	98
1960-61	148	98	170	112	143	95
1961-62	154	99	161	104	150	97
1962-63	168	107	187	119	154	98
1963-64	175	109	207	129	159	99
1964-65	185	112	219	134	163	99
1965-66	167	100	181	108	162	97
1966-67	197	115	243	143	167	98
1967-68	178	102	194	112	171	98
1968-69	192	108	216	122	177	100
1969-70	208	115	247	136	180	99

<sup>(a)</sup> Indexes of value at constant prices, i.e. quantities revalued at average unit values for the base years (see text preceding table).

## CONSUMPTION OF FOODSTUFFS AND BEVERAGES

## Quantities consumed

The estimates of total consumption and consumption per head of population in Australia in the two tables which follow have been compiled by deducting net exports from the sum of production and imports and allowing for recorded movements in stocks of the respective commodities. While the estimates may be generally accepted as being reasonably accurate, there are some deficiencies to which attention should be directed. These relate chiefly to the quantities of fish, rabbits and hares and the quantities of certain oils and fats entering consumption. In addition, little information is available on the quantities of vegetables, fruit, eggs, etc. which householders produce for their own requirements and the extent of wastage occurring in the marketing of foodstuffs. In all these cases careful estimates have been compiled from the best available data, and the quantities shown as entering consumption in Australia have been adjusted to allow for these circumstances. The absence of particulars for stocks of certain commodities has resulted in some inaccuracies in the estimates of annual consumption. Consumption of foodstuffs is measured in general at 'producer' level. As a result, no allowance is made for wastage before the foodstuffs are consumed. In recent years wastage of foodstuffs has possibly been less than previously because of more efficient distribution and storage methods. Furthermore, it is likely that the quantities of foodstuffs shown in the following pages as available for consumption have been supplemented by production by householders for their own requirements. In most cases broad estimates of non-commercial (householders') production have been made. Except in a few special cases, no adjustment has been made for changes in stocks held by wholesalers and retailers. Where no allowance is made it is considered unlikely that these stocks would make any appreciable difference to consumption estimates. It is felt that the foregoing deficiencies do not seriously impair the accuracy of the estimates compiled.

The estimates of consumption per head of population shown in the second of the following tables have been derived by dividing the total apparent consumption of each commodity or commodity group in a given year by the mean population of Australia in the same period.

More detailed information on the consumption of foodstuffs and beverages is contained in the statistical bulletin: *Report on Food Production and the Apparent Consumption of Foodstuffs and Nutrients* (Reference No. 10.10), issued by this Bureau.

The following tables show the average annual consumption during the three-year periods ended 1938-39, 1948-49 and 1958-59, together with the data for each of the years 1967-68, 1968-69 and 1969-70. Because of revisions, figures for some items in the following tables may differ from corresponding figures in earlier chapters of this Year Book.

## ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA, 1936-37 TO 1969-70

Commodity	Average three years ended—					
	1938-39	1948-49	1958-59	1967-68	1968-69	1969-70p
Milk and milk products—						
Fluid whole milk . . . . . mil. gal	161	233	276	338	340	351
Fresh cream . . . . . '000 tons	19.7	5.1	8.7	10.6	10.9	11.1
Condensed, concentrated and evaporated milk—						
Full cream—						
Sweetened . . . . . }	43.2	11.9	11.3	14.8	11.6	12.5
Unsweetened . . . . . }	13.6	27.6	27.6	(a)38.9	(a)42.2	(a)42.5
Skim . . . . . }	n.a.	n.a.	5.6	8.5	8.5	8.4
Powdered milk—						
Full cream . . . . . }	8.1	11.0	11.0	10.7	9.8	9.5
Skim . . . . . }	10.7	1.9	10.7	(b)48.0	(b)55.0	(b)54.6
Infants' and invalids' foods . . . . . }	3.0	4.3	9.4	13.1	14.8	14.3
Cheese . . . . . }	13.4	18.8	25.0	40.0	42.8	44.9
<i>Total milk and milk products (in terms of milk solids)</i> . . . . . }	120.5	167.4	212.4	298.8	308.4	315.3
Meat—						
Beef and veal (carcass weight) . . . . . }	430.3	372.7	538.4	477.6	495.0	473.5
Mutton . . . . . }	184.1	154.0	221.6	221.8	228.5	207.3
Lamb . . . . . }	46.0	86.1	127.7	230.0	259.3	252.2
Pigmeat . . . . . }	26.2	24.3	43.6	77.9	87.7	92.1
Offal . . . . . }	25.7	30.3	49.7	60.6	61.1	63.5
Canned meat (canned weight) . . . . . }	6.5	9.0	17.9	25.5	26.7	28.2
Bacon and ham (cured carcass weight) . . . . . }	31.5	39.9	30.5	41.1	42.4	46.2
<i>Total meat (in terms of carcass equivalent weight)</i> . . . . . }	769.9	736.9	1,054.1	1,157.7	1,223.4	1,187.6

For footnotes see next page.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA, 1936-37 TO 1969-70—*continued*

Commodity		Average three years ended—					
		1938-39	1948-49	1958-59	1967-68	1968-69	1969-70 <sup>p</sup>
Poultry, fish, rabbits and hares—							
Poultry, rabbits and hares (dressed weight)	'000 tons	n.a.	n.a.	n.a.	109.5	118.5	139.7
Fish (edible weight)—							
Fresh—							
Australian origin	"			13.8	16.2	17.9	21.7
Imported	"	19.7	19.4	9.0	18.5	20.5	19.8
Cured (including smoked and salted)	"			3.8	4.1	4.7	4.7
Crustaceans and molluscs	"	2.1	2.1	3.8	11.2	9.1	8.2
Canned—Australian origin	"			3.3	3.7	4.8	7.0
Imported	"	12.4	10.5	7.4	11.9	11.5	11.1
Total poultry, fish, rabbits and hares (edible weight)	"	n.a.	n.a.	n.a.	128.8	137.0	153.8
Eggs and egg products (in terms of eggs in shell)—							
Eggs in shell	"	78.7	86.5	92.1	(c)137.1	(c)139.9	(c)143.0
Egg pulp	"	2.9	8.6	5.7	(c)8.9	(c)8.9	(c)9.1
Egg powder	"	"	"	0.2	(c)0.9	(c)0.8	(c)0.8
Total eggs and egg products	{ mil. doz	81.6	95.1	98.0	(c)146.9	(c)149.7	(c)152.9
		139.3	162.3	167.3	219.3	223.5	228.3
Fats and oils—							
Butter	'000 tons	101.4	84.7	118.4	115.2	114.8	113.9
Margarine—							
Table	"	2.8	3.0	n.a.	15.4	16.2	16.2
Other	"	12.2	18.7	21.2	39.6	44.5	46.7
Vegetable oils and other fats	"	19.6	18.0	19.6	24.0	24.5	25.0
Total fats and oils (fat content)	"	115.5	105.5	n.a.	166.2	171.3	173.2
Sugar and syrups—							
Refined sugar—							
As sugar	'000 tons	216.5	234.6	259.0	254.7	245.1	250.7
In manufactured products	"	110.1	174.2	226.1	313.6	339.7	352.5
Honey, glucose and syrups (sugar content)	"	17.3	19.1	22.8	40.1		
Total sugar and syrups (sugar content)	"	343.9	427.9	507.9	608.4		
Pulse and nuts—							
Dried pulse	"	4.5	7.4	11.1	13.1		
Peanuts (weight without shell)	"	2.8	8.7	7.2	15.5		
Edible tree nuts (weight without shell)	"	2.6	4.4	6.7	10.8	11.6	10.4
Cocoa (raw beans)	"	6.3	11.6	12.1	19.0		
Total pulse and nuts	"	16.2	32.1	37.1	58.4		
Fruit—							
Citrus fruit(d)	"	97.8	127.2	153.8	247.1	289.9	296.4
Other fresh fruit	"	288.2	297.5	341.4	466.9	535.1	454.2
Jams	"	35.1	42.5	37.5	39.3	39.6	37.4
Dried fruit	"	24.8	30.0	26.4	27.1	28.9	27.8
Canned fruit	"	31.9	37.3	59.4	127.2	114.1	121.4
Total fruit (fresh fruit equivalent)	"	532.3	607.9	691.4	994.7	1,106.1	1,038.2
Vegetables(d)—							
Leafy and green vegetables	"	n.a.	154.0	172.1	242.1	251.1	261.8
Tomatoes	"	(e)48.0	86.3	124.4	163.0	168.1	152.5
Root and bulb vegetables	"	n.a.	143.7	152.8	182.9	215.2	208.9
Potatoes—							
White	"	318.5	424.3	495.4	587.7	729.5	679.3
Sweet	"	7.4	5.3	6.1	7.5	7.6	7.8
Other vegetables	"	n.a.	162.8	178.4	207.3	204.4	233.1
Total vegetables	"	n.a.	976.4	1,129.2	1,390.5	1,575.9	1,543.4
Grain products—							
Flour (including wheatmeal for baking and sharps)	"	574.0	689.7	789.1	900.1	922.3	944.1
Breakfast foods	"	32.5	45.8	58.8	80.3	84.4	77.3
Rice (milled)	"	12.2	3.0	n.a.	28.2	29.1	30.2
Tapioca, sago, etc.	"	3.7	2.3	1.4	0.9	0.9	0.8
Pearl barley	"	3.0	1.7	2.0	1.9	1.7	0.3
Total grain products	"	(f)629.7	(f)747.4	n.a.	1,011.3	1,038.3	1,052.6
Beverages—							
Tea	"	21.1	22.1	26.1	27.1	27.8	27.1
Coffee(g)	"	2.0	3.4	5.9	13.9	14.1	15.4
Beer	mil. gal	80.1	129.5	221.0	306.2	321.8	337.1
Wine	"	4.2	9.8	11.1	19.8	22.0	24.4
Spirits	mil. pf gal	1.5	2.4	2.8	4.3	4.3	4.9

(a) Includes ice cream mixes. (b) Includes buttermilk and mixed skim and buttermilk. (c) Not comparable with data prior to 1960-61, in which year the average weight of an egg was altered in calculations from 1.75 oz to 2 oz. (d) Includes fresh equivalent of manufactured products. (e) Probably understated owing to lack of complete data. (f) Includes an allowance for edible starch (cornflour). (g) Coffee and coffee products in terms of processed whole or ground pure coffee.

**ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR  
CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA, 1936-37 TO 1969-70**

Commodity		Average three years ended—					
		1938-39	1948-49	1958-59	1967-68	1968-69	1969-70p
Milk and milk products—							
Fluid whole milk . . . . .	gallons	23.4	30.5	28.3	28.3	28.3	28.2
Fresh cream . . . . .	lb	6.1	1.5	2.0	2.0	2.0	2.0
Condensed, concentrated and evaporated milk—							
Full cream—							
Sweetened . . . . .	"	4.3	3.5	2.6	2.8	2.1	2.2
Unsweetened . . . . .	"	4.0	4.0	6.4	(a)7.3	(a)7.5	(a)7.7
Skim . . . . .	"	n.a.	n.a.	1.3	1.6	1.6	1.5
Powdered milk—							
Full cream . . . . .	"	2.6	3.2	2.5	2.0	1.8	1.7
Skim . . . . .	"	0.6	2.5	(b)9.0	(b)10.1	(b)9.8	(b)9.8
Infants' and invalids' foods . . . . .	"	1.0	1.3	2.2	2.5	2.7	2.6
Cheese . . . . .	"	4.4	5.5	5.7	7.5	7.9	8.1
<i>Total milk and milk products (in terms of milk solids)</i> . . . . .	"	39.3	49.1	48.7	56.1	56.8	56.7
Meat—							
Beef and veal (carcass weight) . . . . .	"	140.3	109.1	123.8	89.7	91.1	85.2
Mutton . . . . .	"	60.0	45.1	51.0	41.7	42.1	37.3
Lamb . . . . .	"	15.0	25.2	29.3	43.2	47.7	45.4
Pigmeat . . . . .	"	8.5	7.1	10.1	14.6	16.1	16.6
Offal . . . . .	"	8.4	8.9	11.4	11.4	11.2	11.4
Canned meat (canned weight) . . . . .	"	2.1	2.6	4.1	4.8	4.9	5.1
Bacon and ham (cured carcass weight) . . . . .	"	10.2	11.7	7.1	7.7	7.8	8.3
<i>Total meat (in terms of carcass equivalent weight)</i> . . . . .	"	250.9	215.7	242.4	217.4	225.1	213.8
Poultry, fish, rabbits and hares—							
Poultry, rabbits and hares (dressed weight)		n.a.	n.a.	n.a.	20.6	21.8	25.1
Fish (edible weight)—							
Fresh—							
Australian origin . . . . .	"	6.4	5.7	3.2	3.0	3.4	3.9
Imported . . . . .	"	2.1	2.1	3.5	3.8	3.6	3.6
Cured (including smoked and salted) . . . . .	"	0.9	0.9	0.8	1.1	0.8	0.8
Crustaceans and molluscs . . . . .	"	0.7	0.6	0.9	2.1	1.5	1.6
Canned—							
Australian origin . . . . .	"	4.1	3.0	0.8	0.7	1.1	1.3
Imported . . . . .	"	1.7	1.7	2.2	2.1	2.0	2.0
<i>Total poultry, fish, rabbits and hares (edible weight)</i> . . . . .	"	n.a.	n.a.	n.a.	24.2	25.6	27.7
Eggs and egg products (in terms of eggs in shell)—							
Eggs in shell . . . . .	"	25.7	25.4	21.2	(c)25.7	(c)25.7	(c)25.7
Egg pulp . . . . .	"	0.9	2.5	1.3	(c)1.7	(c)1.6	(c)1.6
Egg powder . . . . .	"	..	..	..	(c)0.2	(c)0.1	(c)0.1
<i>Total eggs and egg products</i> . . . . .	No.	26.6 243	27.9 255	22.5 206	(c)27.9 221	(c)27.5 220	(c)27.5 220
Fats and oils—							
Butter . . . . .	lb	32.9	24.8	27.2	21.6	21.1	20.5
Margarine—							
Table . . . . .	"	0.9	0.9	n.a.	2.9	3.0	2.9
Other . . . . .	"	4.0	5.2	4.9	7.4	8.2	8.4
Vegetable oils and other fats . . . . .	"	6.4	5.3	4.5	4.5	4.5	4.5
<i>Total fats and oils (fat content)</i> . . . . .	"	37.6	30.9	n.a.	31.2	31.5	31.2
Sugar and syrups—							
Refined sugar—							
As sugar . . . . .	"	70.6	68.7	59.6	47.8	45.1	45.1
In manufactured products . . . . .	"	35.9	51.0	52.0	58.9	62.5	63.4
Honey, glucose and syrups (sugar content) . . . . .	"	5.5	5.6	5.2	7.5		
<i>Total sugar and syrups (sugar content)</i> . . . . .	"	112.0	125.3	116.8	114.3		
Pulse and nuts—							
Dried pulse . . . . .	lb	1.5	2.1	2.6	2.5		
Peanuts (weight without shell) . . . . .	"	0.9	2.5	1.7	2.9		
Edible tree nuts (weight without shell) . . . . .	"	0.8	1.3	1.5	2.0	2.1	1.9
Cocoa (raw beans) . . . . .	"	2.1	3.4	2.8	3.6		
<i>Total pulse and nuts</i> . . . . .	"	5.3	9.3	8.6	11.0		
Fruit—							
Citrus fruit(a) . . . . .	lb	31.9	37.2	35.4	46.4	53.4	53.4
Other fresh fruit . . . . .	"	94.0	87.1	78.4	87.7	98.5	81.8
Jams . . . . .	"	11.4	12.4	8.6	7.4	7.3	6.7
Dried fruit . . . . .	"	8.1	8.7	6.0	5.1	5.3	5.0
Canned fruit . . . . .	"	10.4	11.0	13.6	23.9	21.0	21.8
<i>Total fruit (fresh fruit equivalent)</i> . . . . .	"	173.6	178.0	157.6	186.8	203.6	186.9

For footnotes see next page.



**ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR  
CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA  
1936-37 TO 1969-70—continued**

Commodity	Average three years ended—					
	1938-39	1948-49	1958-59	1967-68	1968-69	1969-70 <sub>p</sub>
<b>Vegetables(d)—</b>						
Leafy and green vegetables . . . . . lb	n.a.	45.1	39.5	45.5	46.2	47.1
Tomatoes . . . . . (e) 15.7	25.3	28.6	30.6	30.9	27.5	27.5
Root and bulb vegetables . . . . . "	n.a.	42.1	35.1	34.3	39.6	37.6
Potatoes—						
White . . . . . "	103.8	124.2	113.9	110.4	134.3	122.3
Sweet . . . . . "	2.4	1.5	1.4	1.4	1.4	1.4
Other vegetables . . . . . "	n.a.	47.7	41.0	38.9	37.6	42.0
<i>Total vegetables</i> . . . . . "	<i>n.a.</i>	<i>285.9</i>	<i>259.5</i>	<i>261.1</i>	<i>290.0</i>	<i>277.8</i>
<b>Grain products—</b>						
Flour (including wheatmeal for baking and sharps) . . . . . "	187.1	201.9	181.5	169.0	169.7	169.9
Breakfast foods . . . . . "	10.6	13.4	13.5	15.1	15.5	13.9
Rice (milled) . . . . . "	4.0	0.9	n.a.	5.3	5.4	5.4
Tapioca, sago, etc. . . . . "	1.2	0.7	0.3	0.2	0.2	0.1
Pearl barley . . . . . "	1.0	0.5	0.4	0.4	0.3	..
<i>Total grain products</i> . . . . . (f) 205.3	(f) 218.8	<i>n.a.</i>	<i>189.9</i>	<i>191.1</i>	<i>189.5</i>	
<b>Beverages—</b>						
Tea . . . . . "	6.9	6.5	6.0	5.1	5.1	4.9
Coffee(g) . . . . . "	0.6	1.0	1.3	2.6	2.6	2.8
Beer . . . . . gallons	11.7	16.9	22.7	25.7	26.4	27.1
Wine . . . . . "	0.6	1.3	1.1	1.7	1.8	2.0
Spirits . . . . . pf gal	0.2	0.3	0.3	0.4	0.4	0.4

(a) Includes ice cream mixes. (b) Includes buttermilk and mixed skim and buttermilk. (c) Not comparable with data prior to 1960-61, in which year the average weight of an egg was altered in calculations from 1.75 oz to 2 oz.  
(d) Includes fresh equivalent of manufactured products. (e) Probably understated owing to lack of complete data.  
(f) Includes an allowance for edible starch (cornflour). (g) Coffee and coffee products in terms of processed whole or ground pure coffee.

### Level of nutrient intake

The next table shows details of the estimated supplies of nutrients available for consumption in Australia during the years 1967-68 to 1969-70 in comparison with the annual averages for the three-year periods ended 1938-39, 1948-49 and 1958-59. The table has been compiled by the Nutrition Section of the Commonwealth Department of Health and is based on the estimates of the quantity of foodstuffs available for consumption per head of population shown in the preceding table.

**ESTIMATED SUPPLY OF NUTRIENTS AVAILABLE FOR CONSUMPTION  
AUSTRALIA, 1936-37 TO 1969-70  
(Per head per day)**

Nutrient	Average three years ended—			1967-68	1968-69	1969-70 <sub>p</sub>
	1938-39	1948-49	1958-59	(a)	(a)	(a)
Kilocalories . . . . .	3,117	3,245	3,297	3,254	3,364	3,264
<b>Protein—</b>						
Animal . . . . . g	58.7	57.4	59.6	64.2	61.5	64.7
Vegetable . . . . . "	30.9	35.3	32.3	34.3	40.3	35.6
Total . . . . . "	89.6	92.7	91.9	98.5	101.8	100.3
Fat . . . . . "	133.5	121.7	131.7	122.8	125.4	122.6
Carbohydrate . . . . . "	377.4	424.8	416.7	405.2	419.2	412.7
Calcium . . . . . mg	642	785	817	963	985	980
Iron . . . . . "	15.4	15.1	14.0	14.6	15.1	14.8
Vitamin A . . . . . I.U.	4,905	4,630	4,568	(b) 1,443	(b) 1,557	(b) 1,548
Ascorbic acid . . . . . mg	86	96	89	88	98	92
Thiamine . . . . . "	1.4	1.5	1.3	1.6	1.7	1.6
Riboflavin . . . . . "	1.7	1.9	1.8	2.8	2.8	2.9
Niacin . . . . . "	18.7	17.6	18.6	19.9	20.9	20.1

(a) Not comparable with previous years. Figures are based on conversion factors calculated from the revised and enlarged edition of 'Tables of Composition of Australian Foods'. (b) Microgrammes.

NOTE. One international unit of vitamin A activity is equivalent<sub>u</sub> to 0.3 microgrammes of retinol.

## INTERNAL TRADE

Extensive statistics of retail trade have been collected and published over many years. The first full census of wholesale trade, however, was conducted as part of the integrated economic censuses of 1968–69, outlined briefly below. For a detailed description of these censuses, reference should be made to Year Book No. 56, 1970, Chapter 31, Preliminary results of the censuses were published in the following Preliminary Statements: Manufacturing Establishments and Electricity and Gas Establishments (Reference No. 12.22); Mining Establishments (Reference No. 10.48); Retail Establishments and Selected Service Establishments (Reference No. 11.7); and Wholesale Establishments (Reference No. 11.51). These publications contain more detail for States than is shown in the table below.

**Economic Censuses, 1968-69**

For the year ended 30 June 1969 the censuses of Wholesale Trade, and of Retail Trade and Selected Services, were conducted for the first time on an integrated basis with censuses of Mining, Manufacturing, and Electricity and Gas Production and Distribution. The integration of these economic censuses was designed to increase substantially the usefulness and comparability of the kinds of statistics already being collected and published by the Bureau and to form a basis for the sample surveys which supply current economic statistics from quarter to quarter, particularly those which provide data for the quarterly national income and expenditure estimates.

The integration of these economic censuses meant that for the first time they were being collected on the basis of a common framework of reporting units and data concepts and in accordance with a standard industrial classification. As a result, the statistics for the industries covered by the censuses are now provided with no overlapping or gaps in scope, and in such a way that aggregates for certain important economic data such as value added, employment, salaries and wages, fixed capital expenditure and stocks can be obtained on a consistent basis for all sectors of the economy covered by the censuses.

The standardisation of census units in the integration of economic censuses means that the basic census unit (the establishment) in general now covers all the operations carried on under the one ownership at a single physical location. The retail establishment is thus one predominantly engaged in retailing, and the wholesale establishment one predominantly engaged in wholesaling, but the data supplied for them now cover, with a few exceptions, all activities at the location.

Establishment statistics, other than the number of establishments, also include data relating to separately located administrative offices and ancillary units serving the establishment and forming part of the business (enterprise) which owns and operates the establishment. These units, such as head offices, storage premises, transport depots and motor vehicle repair and maintenance workshops, were formerly excluded from censuses.

Figures in the summary tables shown in this section were obtained from the 1968–69 censuses and are preliminary only and subject to revision. Further and more detailed statistics from the 1968–69 censuses, including details for commodities and for smaller areas, will be published progressively.

*Wholesale trade.* The term wholesale trade is used in the wholesale census in the broad sense to include the resale (by agents or principals) of new or used goods to retailers or other wholesalers or to institutional (including government), professional or other business users (including farmers and builders). The more important types of business engaged in wholesale trade are wholesale merchants, who take title to the goods they sell; manufacturers' sales branches; commission agents, including import and export agents and purchasing agents; petroleum products distributors; and co-operative and marketing boards engaged in marketing farm products.

Each establishment in the integrated censuses is identified in terms of a particular location and all sales, employment, etc., are recorded for that location, regardless of the size of the sales territory covered, i.e. the location of customers. For this reason, all of the sales, etc., of the wholesale establishments located in the State of Victoria, for example, are credited to Victoria even though the sales territories may extend over several States.

In the tables which follow, wholesale establishments have been classified by type of operation according to the nature of the functions performed. The basis of this classification is the description of 'type of operation' reported by businesses for each individual wholesale establishment.

**WHOLESALE ESTABLISHMENTS: SUMMARY OF OPERATIONS  
BY BROAD TYPE OF OPERATION: AUSTRALIA, 1968-69**

Broad type of operation	Number of establishments operating during 1968-69	Persons employed (a)	Sales on own account, transfers out and other operating revenue		Stocks at 30 June		Purchases, transfers in and selected expenses	Value added (b)	Sales or purchases on commission
	No.	No.	\$m	\$m	1968	1969	\$m	\$m	\$m
Primary produce dealers or agents	3,666	38,432	105.9	1,639.3	115.9	112.4	1,386.8	249.0	2,915.1
Wholesale merchants—									
Import and/or export merchants	3,320	34,819	109.1	2,300.3	295.5	340.6	2,051.7	293.7	275.5
Other wholesale merchants	18,726	204,353	557.8	7,716.9	960.3	1,039.1	6,447.2	1,348.5	334.6
Manufacturers' sales branches holding stocks	1,831	30,922	99.3	1,607.1	167.2	188.3	1,288.1	340.1	448.6
Commission agents or brokers	3,554	16,690	45.0	392.9	32.1	32.0	284.4	108.4	2,002.3
Petroleum distributors	2,458	21,532	76.1	1,636.2	119.8	136.1	1,324.8	327.7	1,364.5
Repairers and lessors of machinery and equipment	676	3,892	11.1	58.2	2.9	3.5	21.5	37.4	1.5
<b>Total wholesale trade</b>	<b>34,231</b>	<b>350,640</b>	<b>1,004.3</b>	<b>15,350.8</b>	<b>1,693.6</b>	<b>1,851.9</b>	<b>12,804.4</b>	<b>2,704.7</b>	<b>7,342.2</b>

For footnotes see table below.

**WHOLESALE ESTABLISHMENTS: STATES AND TERRITORIES, 1968-69**

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Establishments operating during 1968-69	No. 12,197	No. 9,541	No. 4,930	No. 3,162	No. 3,154	No. 906	No. 113	No. 228	No. 34,231
Persons employed (a)	No. 128,196	No. 97,277	No. 48,793	No. 34,193	No. 31,065	No. 8,846	No. 780	No. 1,490	No. 350,640
Wages and salaries	\$m 388.9	\$m 290.9	\$m 127.3	\$m 84.5	\$m 82.1	\$m 23.9	\$m 2.4	\$m 4.4	\$m 1,004.3
Sales on own account, transfers out and other operating revenue	\$m 5,734.0	\$m 4,757.7	\$m 2,067.6	\$m 1,150.0	\$m 1,251.5	\$m 308.8	\$m 30.3	\$m 51.0	\$m 15,350.8
Stocks at 30 June—									
1968	624.8	551.2	207.0	126.7	137.1	38.5	3.8	4.3	1,693.6
1969	696.4	590.9	223.8	134.0	156.3	41.4	4.3	4.9	1,851.9
Purchases, transfers in and selected expenses	\$m 4,772.5	\$m 3,993.6	\$m 1,741.3	\$m 935.7	\$m 1,042.3	\$m 254.8	\$m 23.8	\$m 40.5	\$m 12,804.4
Value added (b)	\$m 1,033.1	\$m 803.9	\$m 343.0	\$m 221.5	\$m 228.3	\$m 56.9	\$m 7.0	\$m 11.1	\$m 2,704.7
Sales or purchases on commission	\$m 2,656.8	\$m 2,346.5	\$m 922.6	\$m 571.3	\$m 653.9	\$m 151.4	\$m 25.9	\$m 14.0	\$m 7,342.2

(a) At end of June 1969; includes working proprietors. (b) Sales on own account, transfers out and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.

*Retail trade.* The definition of 'retail trade' adopted in the 1968-69 Retail Census is the same as the definition used in previous retail censuses, i.e. the resale of new and used goods to final consumers for personal and household consumption. The basis on which previous censuses of retail establishments were conducted was described in detail in Year Book No. 56, 1970 (page 1022).

Previous censuses of retail establishments included a number of activities that were also covered by the annual manufacturing census: principally motor vehicle repairs, dry cleaning, shoe repairs and tyre retreading. Takings from these activities were reported in the retail trade census but not included in 'retail sales'. The following activities were also included in previous retail censuses if they were carried on in establishments which had retail sales of more than \$1,000: custom dress-making and custom tailoring, clothing repair and alterations, making up and repair of blinds, awnings and curtains, repairs of domestic appliances, panel beating and smash repairs, watch and clock repairs, jewellery repairs, and baking of cakes in cake shops. These activities were also covered by the annual manufacturing census. With the adoption of the new establishment concept in the 1968-69 economic censuses, no establishment was required to supply returns in more than one census and all establishments mainly engaged in the above activities are now included in the retail trade census only.

Censuses of retail trade in Australia have traditionally included certain types of service establishments in their scope, in addition to retail establishments more narrowly defined. Some of the service establishments so included make retail sales in appreciable volume as well as providing important services for which the statistics can be conveniently collected in the framework of the retail census.



The census of retail trade for 1968-69 included the following types of service establishments in its scope in addition to establishments classified to Retail Trade: motion picture theatres; cafes and restaurants; licensed hotels, motels and wine saloons; licensed clubs; laundry and dry cleaning services; and hairdressing and beauty salons. Of these service industries, cafes and restaurants, licensed hotels, motels and wine saloons and hairdressing and beauty salons had been included in previous censuses as retail establishments, while the remainder were included in the supplementary collections made from establishments not described as retail establishments.

Some changes in the scope of the retail census have been made for reasons not connected with the introduction of a standard industrial classification; for example bread vending and milk vending by independent vendors mainly engaged in retailing bread or milk by home delivery service are included for the first time.

Because of the changes which have occurred in the definition of census units, the scope of the census and the items of data collected, it is not possible to make direct comparisons between the figures obtained from the 1968-69 Retail Census and those obtained from previous retail censuses or from the monthly and quarterly retail surveys based on previous retail censuses. For further information concerning such changes and their effects on comparisons with other statistics of retail trade, reference should be made to Year Book No. 56, 1970, Chapter 31, and to *Economic Censuses, 1968-69: Retail Establishments and Selected Service Establishments—Preliminary Statement* (Reference No. 11.7).

#### RETAIL ESTABLISHMENTS: SUMMARY OF OPERATIONS, BY INDUSTRY GROUP AUSTRALIA, 1968-69

Industry group	Number of estab- lishments operating during 1968-69	Persons employed (a)	Wages and salaries	Sales and other operating revenue	Stocks at 30 June		Purchases, transfers in and selected expenses	Value added (b)
	No.	No.	\$m	\$m	1968	1969	\$m	\$m
Department, variety and general stores . . . .	1,048	98,099	204.2	1,361.9	184.8	199.3	1,017.8	358.6
Food stores . . . .	55,701	235,314	260.1	3,398.8	176.1	193.3	2,739.9	676.1
Bread and milk vendors . .	5,838	15,445	10.7	205.6	0.7	0.6	160.8	44.7
Clothing, fabrics and furniture stores . . . .	20,461	86,003	138.6	1,257.6	245.1	261.0	913.2	360.3
Household appliance and hardware stores . . . .	8,198	41,356	83.9	677.5	106.0	114.6	482.1	204.0
Motor vehicle dealers, petrol and tyre retailers . . . .	27,126	170,100	356.9	4,165.8	313.6	349.9	3,303.0	899.1
Other retailers . . . .	19,550	96,431	113.8	994.0	146.6	160.9	687.7	320.6
<i>Total retail establishments</i>	<i>137,922</i>	<i>742,748</i>	<i>1,168.2</i>	<i>12,061.2</i>	<i>1,172.9</i>	<i>1,279.6</i>	<i>9,304.5</i>	<i>2,863.4</i>
Motion picture theatres . .	899	7,697	11.5	45.8	0.2	0.2	17.3	28.7
Restaurants and licensed hotels	11,844	126,546	206.0	1,239.3	34.6	38.7	754.4	489.0
Licensed clubs . . . .	2,682	39,950	78.8	337.3	7.5	8.4	137.5	200.7
Laundries and dry cleaners . .	2,245	20,729	36.3	92.7	1.7	1.8	23.8	69.0
Hairdressing and beauty salons	9,503	27,376	27.6	89.0	3.8	4.1	22.4	66.9
<i>Total selected service establishments . . . .</i>	<i>27,173</i>	<i>222,498</i>	<i>360.2</i>	<i>1,804.1</i>	<i>47.6</i>	<i>53.2</i>	<i>955.4</i>	<i>854.3</i>
<i>Total retail and selected service establishments . .</i>	<i>165,095</i>	<i>965,246</i>	<i>1,528.4</i>	<i>13,865.3</i>	<i>1,220.5</i>	<i>1,332.8</i>	<i>10,259.9</i>	<i>3,717.7</i>

For footnotes see table below.

#### RETAIL ESTABLISHMENTS AND SELECTED SERVICE ESTABLISHMENTS, STATES AND TERRITORIES, 1968-69

	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Establishments operating during 1968-69 . . . .	No. 60,875	46,387	23,909	15,201	12,079	5,021	578	1,045	165,095
Persons employed(a) . . .	No. 379,026	266,640	121,928	85,870	70,438	29,667	3,391	8,286	965,246
Wages and salaries . . .	\$m 624.7	\$m 414.9	\$m 185.7	\$m 128.8	\$m 109.5	\$m 40.7	\$m 7.2	\$m 16.9	\$m 1,528.4
Sales and other operating revenue . . . .	5,294.9	3,846.1	1,835.3	1,165.9	1,121.5	386.7	66.8	148.1	13,865.3
Stocks at 30 June—									
1968 . . . .	458.2	329.0	172.2	110.2	93.2	38.8	5.8	13.1	1,220.5
1969 . . . .	495.8	363.8	187.5	120.2	101.8	42.3	7.2	14.2	1,332.8
Purchases, transfers in and selected expenses . . . .	3,839.7	2,860.5	1,382.5	873.4	853.4	290.5	50.1	109.8	10,259.9
Value added(b) . . . .	1,492.8	1,020.4	468.1	302.5	276.7	99.7	18.1	39.4	3,717.7

(a) At end of June 1969; includes working proprietors and unpaid helpers working at least 15 hours during the week.  
(b) Sales, and other operating revenue plus increase (or less decrease) in the value of stocks, less purchases, transfers in and selected expenses.



**Value of retail sales in each commodity group, Australia, based on  
1961-62 Census of Retail Establishments**

The following table shows the value of retail sales of goods in each of the commodity groups specified in the years 1961-62, and 1967-68 to 1970-71, on a comparable basis throughout. The figures for the year 1961-62 were obtained from the 1961-62 census (*see* Year Book No. 56, 1970, page 1022), and figures for the other years shown are estimates based on sample surveys, on a basis comparable with the 1961-62 census.

**VALUE OF RETAIL SALES: COMMODITY GROUPS, AUSTRALIA(a)  
1961-62 AND 1967-68 TO 1970-71  
(\$ million)**

<i>Commodity group</i>	<i>1961-62</i>	<i>1967-68</i>	<i>1968-69</i>	<i>1969-70</i>	<i>1970-71</i>
Groceries . . . . .	858.3	1,249.1	1,320.1	1,402.8	1,500.0
Butchers' meat . . . . .	422.3	616.2	630.7	669.8	707.1
Other food(b). . . . .	729.9	1,002.0	1,038.1	1,116.3	1,193.0
<i>Total, food and groceries</i>	<i>2,010.5</i>	<i>2,867.3</i>	<i>2,988.9</i>	<i>3,188.9</i>	<i>3,400.1</i>
Beer, wine and spirits(c) . . . . .	545.9	811.9	867.2	941.5	1,011.2
Clothing and drapery . . . . .	900.0	1,248.5	1,312.3	1,394.0	1,496.3
Footwear . . . . .	154.7	210.0	216.1	232.0	248.4
Hardware, china and glassware(d) . . . . .	146.0	183.4	201.3	222.1	239.7
Electrical goods(e) . . . . .	348.0	446.5	465.5	497.5	547.8
Furniture and floor coverings . . . . .	230.1	358.2	393.2	431.7	461.2
Chemists' goods . . . . .	265.8	417.3	453.9	501.6	552.9
Newspapers, books and stationery . . . . .	166.4	252.2	272.2	296.4	318.0
Other goods(f) . . . . .	489.7	738.4	810.5	876.3	936.3
<i>Total (excluding motor vehicles, etc.)</i>	<i>5,257.1</i>	<i>7,533.7</i>	<i>7,981.1</i>	<i>8,582.0</i>	<i>9,211.9</i>
Motor vehicles, parts, petrol, etc.(g) . . . . .	1,603.2	2,818.7	3,048.8	3,350.4	3,577.2

(a) Northern Territory and Australian Capital Territory have been excluded from this table because figures for these two Territories for 1968-69, 1969-70 and 1970-71 are not yet available. (b) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish, etc., but excludes some delivered milk and bread. (c) Excludes sales made by licensed clubs. (d) Excludes basic building materials, builders' hardware and supplies such as tools of trade, paint, etc. (e) Includes, radios, television and accessories, musical instruments, domestic refrigerators, etc. (f) Includes tobacco, cigarettes, etc., jewellery, sporting goods, etc., but excludes grain and produce and business machines. (g) Includes new and used motor vehicles, parts, petrol, etc., but excludes tractors, farm machinery and implements, earth-moving equipment, etc.

**Total value of retail sales, States**

**TOTAL VALUE OF RETAIL SALES (EXCLUDING MOTOR VEHICLES, PARTS, PETROL, ETC.)  
STATES, 1961-62 AND 1967-68 TO 1970-71  
(\$ million)**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1961-62 . . . . .	2,060.4	1,517.1	701.6	451.6	360.3	166.1	15.8	33.4	5,306.5
1967-68 . . . . .	2,866.5	2,177.1	1,020.6	663.6	578.0	227.9	34.4	74.6	7,642.7
1968-69 . . . . .	3,020.9	2,293.5	1,068.8	706.5	651.6	239.8	n.a.	n.a.	n.a.
1969-70 . . . . .	3,250.5	2,469.5	1,142.0	760.9	706.3	252.8	n.a.	n.a.	n.a.
1970-71 . . . . .	3,491.6	2,654.7	1,213.8	812.3	773.2	266.3	n.a.	n.a.	n.a.

**TOTAL VALUE OF RETAIL SALES OF MOTOR VEHICLES, PARTS, PETROL, ETC., STATES  
1961-62 AND 1967-68 TO 1970-71  
(\$ million)**

<i>Year</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>N.T.</i>	<i>A.C.T.</i>	<i>Aust.</i>
1961-62 . . . . .	623.1	431.2	218.0	143.1	133.9	53.9	5.8	13.0	1,622.0
1967-68 . . . . .	1,083.3	760.1	397.1	242.0	249.9	86.3	16.5	29.7	2,864.9
1968-69 . . . . .	1,183.8	795.0	428.2	260.9	293.3	87.6	n.a.	n.a.	n.a.
1969-70 . . . . .	1,318.1	871.8	463.8	284.1	315.7	96.9	n.a.	n.a.	n.a.
1970-71 . . . . .	1,417.7	931.6	486.9	295.1	339.2	106.7	n.a.	n.a.	n.a.

## INTERSTATE TRADE

Prior to the federation of the Australian Colonies (now States) each Colony published statistics of its trade with the other Colonies. A similar record was continued by the Commonwealth Government under the provisions of the Constitution (section 93). On the expiry of the 'bookkeeping' period these records were discontinued as from 13 September 1910, and the last published statements were for the year 1909. Later, the Governments of Western Australia and Tasmania revived the records, and relevant statistics are available again for those States. A detailed collection for Queensland was re-introduced from July 1953.

At the Conference of Statisticians held in January 1928 it was resolved that efforts should be made in other States to record the interstate movement of certain principal commodities. Complete interstate trade statistics are now published in detail for Queensland, Western Australia and Tasmania by the Deputy Commonwealth Statisticians in those States, and incomplete statistics, relating mainly to trade with Western Australia and Tasmania, by the Deputy Commonwealth Statisticians in the remaining States.

## STATISTICAL ORGANISATION IN AUSTRALIA

### Early development of Australian statistics

Statistical organisation in Australia has its origin in the 'Blue Books' which, in the Crown Colony days, were prepared annually for the information of the Colonial Office. Although intended primarily for administrative purposes, these documents were important sources of statistical data, and formed the basis from which later statistical publications were developed. Following the advent of responsible government, the 'Blue Book' was succeeded in all States by 'Statistical Registers' which, however, were still largely summaries of the 'by-product' statistics of government administrative departments.

The growing need for quantitative data concerning the progress of the several young communities of Australia led eventually to the appointment of official Statisticians commissioned to prepare and publish such data. Conferences were held between the Statisticians to allow for the interchange of ideas between States and to provide for uniform State statistics which could be aggregated to Australian totals. Altogether, six conferences were held prior to the formation of the Commonwealth Bureau of Census and Statistics in 1906—in 1861, 1875, 1890, 1900, 1902 and 1903. The holding of these conferences has been continued since the formation of the Commonwealth Bureau, and a representative from New Zealand attended up to 1928.

### Creation of the Commonwealth Bureau of Census and Statistics

Under the provisions of Section 51 of the Commonwealth Constitution, power is conferred on the Commonwealth Parliament 'to make laws for the peace, order, and good government of the Commonwealth with respect to . . .' (*inter alia*) '(XI.) Census and Statistics'. Accordingly the *Census and Statistics Act* 1905 was passed, and in 1906 the Commonwealth Bureau of Census and Statistics was created. A conference of Statisticians in 1906 defined the relations between the Commonwealth and State Bureaux, and in each case the State Statistician became the representative in his own State of the Commonwealth Statistician for the purpose of administering the Commonwealth Act. In addition, each State had its own 'Statistics Act', and although these were not identical for all States, they embodied common principles. The Commonwealth Bureau did not attempt to duplicate the existing State statistical organisations, but endeavoured to use their services whenever possible, undertaking the initial collection of statistics only in fields not covered by the States, or in which efficiency demanded complete centralisation.

### Integration of statistical services

The creation and development of the Commonwealth Bureau of Census and Statistics, the frequent conferences of Commonwealth and State Statisticians, and the close and increasing liaison between officers dealing with the same subjects in the State and Commonwealth fields did much to promote uniformity in official statistics and methods employed in their collection throughout Australia. The complete realisation of this aim could not, however, be achieved with seven separate statistical systems, even with the utmost co-operation of those concerned. This became apparent when economic problems following the 1914-18 War drew attention to deficiencies in Australian statistical data.

The first step towards integration was taken in 1924, when, in response to a proposal by the Prime Minister to the Premiers' Conference that State and Commonwealth Statistical Bureaux be amalgamated, the Tasmanian office was transferred to the Commonwealth. (Other States did not agree to the proposal at that time.) The Tasmanian office has since functioned as a Commonwealth office which also serves State statistical needs.

The varied economic and social problems of the 1920's and 1930's, the 1939-45 War and the post-war boom, and the development during and since the war of a volume of new statistics, imposed a severe strain on the statistical systems and increased the complexities of the several administrations in their efforts to secure and maintain uniformity in statistical collections.

The difficulties of maintaining efficient statistical services were further emphasised during the immediate post-war years when the problems of planning for post-war reconstruction greatly increased the demand for current economic statistics. In 1949, discussions with the Premiers were initiated by the Prime Minister, with the object of integrating the statistical services of the Commonwealth and the States by agreement. Following negotiations, all State Governments accepted the terms of draft agreements to integrate their respective statistical offices with that of the Commonwealth, and effect was given to this by the *Statistics (Arrangements with States) Act 1956*. This legislation, permissive in nature, was designed to enable the Commonwealth to enter into an agreement with any State to effect an amalgamation of Commonwealth and State statistical offices and services. The object of such an agreement was to establish an integrated statistical service, with branches in each State, operated by Commonwealth statistical officers under the immediate direction of a Deputy Commonwealth Statistician who would hold office under both the Commonwealth and State Governments. Both Commonwealth and State were to be adequately served with statistics, and no State would be required to surrender its existing powers in the field of statistics. Integration of the Commonwealth and State statistical services was finally accomplished when the integration arrangement with Victoria came into effect on 15 September 1958.

The relationships which at present obtain between the Bureau and the several State Governments are a reflection of these agreements. Each State has retained its power to collect statistics under State laws, but the Commonwealth provides the staff and the funds, and is responsible for all statistical work required by both Commonwealth and State Governments. Conferences of the Commonwealth and Deputy Commonwealth Statisticians are held annually to discuss current and projected future operations of the Bureau.

Under the system as it now operates, Deputy Commonwealth Statisticians and their staffs provide the principal avenue of contact between State Government agencies and other State users and suppliers of statistical information. For the most part, negotiations with Commonwealth agencies and other national users and suppliers of statistical information are undertaken by the Commonwealth Statistician and his Central Office staff. However, the division of responsibility between the Bureau's Central and State Offices in the matter of relationships with users and suppliers of statistical information is by no means as precise as might be assumed from the above remarks. The statistical services are highly integrated and operate as one unit rather than as seven separate Bureaux. In general, it might be said that moves to develop new statistical series or to modify existing ones for State purposes are normally initiated by Deputy Statisticians, whereas moves to develop new or modified series for national socio-economic policy purposes are usually initiated by the Commonwealth Statistician.

### Scope of the Commonwealth Bureau of Census and Statistics

The scope of the Commonwealth Bureau of Census and Statistics has continually been widened. Additional requirements in the administrative, industrial, financial and scientific spheres have led to the development of many new statistical collections. All these activities are covered by the Census and Statistics Act, which empowers the Statistician to collect information and contains stringent provisions to ensure that the secrecy of information provided by individual persons and businesses is preserved.

In the Australian centralised official statistical service, it is recognised that there is a danger that official statisticians may become isolated from the thinking of the users of statistics and insensitive to the problems of the firms or individual persons whose responsibility it is to supply statistical information. The dangers inherent in this situation are for the most part obviated by the six State Offices of the Bureau keeping in very close contact with the individual businesses which use statistics and supply statistical information, and special steps are taken to ensure that users have adequate scope for expression of their needs and that requests by the Bureau for information are kept within reasonable and practical limits. The methods towards this end which have been adopted in the Bureau are reflected in its organisational structure. The organisation is on the basis of specialist subject-matter branches, and to each relatively narrow field of socio-economic activity there is a corresponding branch within the Bureau which is responsible for obtaining statistics and providing statistical services. Thus, in the Central Office, there are specialist branches dealing with primary industries; secondary industries; wholesale and retail trade; employment; finance; population and vital statistics; etc. A broadly similar organisational pattern exists in State Offices of the Bureau, although local requirements have naturally given rise to differences in detail.



### Organisation of the Central Office of the Commonwealth Bureau of Census and Statistics

The Central Office of the Bureau is organised functionally into the following branches, listed alphabetically. As shown below, these branches are further sub-divided into specialist subject matter sections.

*Demography and Employment Branch.* Demographic and Social; Employment and Field Survey Operations; Population Research.

*Integration, Classification and Private Finance Branch.* Integration; Classification; Private Finance.

*National Accounts and Public Finance Branch.* Public Finance and Taxation; National Income and Expenditure; Inter-industry and Sector Financial Accounts.

*Overseas Transactions Branch.* Balance of Payments; Overseas Trade and Shipping.

*Population Census Branch.* Classification Research; Field Organisation and Mapping; Operations.

*Prices and Labour Branch.* Labour and Retail Prices; Quantum Indexes and Wholesale Prices.

*Production and Distribution Branch.* Internal Trade; Primary Industry; Secondary Industry.

*Sampling and Methodology Branch.* Sampling; Methodology; Special Projects.

*Services Branch.* Establishments and Finance; Publications; Secretariat.

In addition to the above-mentioned branches, the Bureau's *Computer Service Centre* operates the largest computer network in Australia and one of the largest used for statistical purposes in the world. It comprises a Control Data 3600 and two 3300 computers in Canberra; 3300, 3200 and 160-A computers in Sydney and Melbourne; 3300 and 160-A computers in Adelaide; 3200 and 160-A computers in Brisbane; and 3200 computers in the remaining State capitals. All installations use a full complement of peripheral devices. Mass storage and interrogation facilities are available at Canberra, Sydney, Melbourne and Adelaide.

At 30 June 1971 the staff of the Bureau numbered 3,391, of whom 656 were university graduates. Of the total staff, 1,419 were employed in the Bureau's Central Office in Canberra. Expenditure for the year 1970-71 amounted to \$20,565,825.

### Relation of the Bureau to other Commonwealth Departments

The Commonwealth Statistician is the co-ordinating authority on all statistical activities in Commonwealth Departments, and where any new statistical field is to be established involving the regular collection of statistics, the Commonwealth Statistician must be consulted to ensure that they are necessary and that they are based on sound statistical methods; furthermore, the Commonwealth Statistician is empowered to make regular inspections of all statistical work undertaken in Departments to ensure that their needs are being met by the most economical means and without duplication of effort.

The Bureau provides methodological and general statistical advice to Commonwealth Departments and instrumentalities from time to time as required. However, for a small number of Departments, which have a continuing need for specialised statistical services, the Bureau provides, from its own staff, the key personnel to serve these needs.

## STATISTICAL AND OTHER OFFICIAL PUBLICATIONS OF AUSTRALIA

The official statistical publications of Australia may be divided bibliographically into two main divisions, namely: (i) Commonwealth publications dealing both individually and collectively with the several States of Australia; and (ii) State publications dealing with individual States only. Commonwealth publications containing statistics may be grouped under two heads, namely: (i) publications issued by the Commonwealth Statistician; and (ii) Parliamentary and Departmental Reports and Papers. State publications may similarly be grouped into publications issued by the Deputy Commonwealth Statistician in each State, and State Parliamentary and Departmental Reports and Papers. The statistics contained in the second group in each case are in the main incidental to the primary purpose of the particular report or paper.

### Publications issued by the Commonwealth Statistician

#### Principal statistical publications issued to date

The following is a list of the principal statistical publications issued from the Central Office of the Commonwealth Bureau of Census and Statistics since its inauguration. Minor changes in titles have not been referred to. Copies of a number of these publications, particularly earlier issues, are not now available.

*Australian Capital Territory Statistical Summary.* Annually, 1963 to 1971.

*Balance of Payments, half-yearly,* 1946-47 to 1970-71.

*Balance of Payments, Australia.* Statements Nos 1 to 3, 1928-29 to 1951-52.



- Banking and Currency*. Bulletin, annually, 1961–62 and 1962–63 (combined issue) to 1969–70.
- † *Building and Construction*. Bulletin, annually, 1964–65 to 1968–69.
- Causes of Death*. Bulletin, annually, 1963 to 1968.
- Census (1911) Results*. Bulletin. Vols I (Statistician's Report), II and III, with Appendix *Mathematical Theory of Population*.
- Census (1921) Results*. Bulletins, Nos 1 to 26. Parts I to XVI, forming Vol. I, and Parts XVII to XXIX (Part XXVII, Life Tables), forming, with the Statistician's Report, Vol. II.
- Census (1933) Results*. Bulletins, Nos 1 to 25. Parts I to XIV, forming Vol. I, Parts XV to XXVIII, forming Vol. II, and Parts XXIX to XXXVII, forming, with the Statistician's Report and Australian Life Tables, 1932–1934, Vol. III.
- Census (1947) Results*. Bulletins, Nos 1 to 25. Parts I to XVI, forming Vol. I, Parts XVII to XIX, forming Vol. II, and Parts XX to XXVIII, forming with the Statistician's Report and Australian Life Tables, 1946–1948, Vol. III.
- Census (1954) Results*. Bulletins, Nos 1 to 3. Vols I to VI, comprising respectively Parts I to V for each State; Vol. VII, comprising Parts I to V for the Australian Territories; Vol. VIII, comprising Parts I to III for Australia, Australian Life Tables, 1953–1955, and the Statistician's Report.
- Census (1961) Results*. Vols I to VI, comprising respectively Parts I to V for each State; Vol. VII, comprising Parts I to V for the Australian Territories; and Vol. VIII, comprising Parts I to III for Australia, Australian Life Tables, 1960–1962, and the Statistician's Report.
- Census (1966) Results*. Summarised results for each State and Territory and for Australia have been published in a series of mimeographed bulletins available from the Commonwealth Statistician, and the volumes containing the final figures are being issued progressively (see the list of printed publications at the end of this Year Book).
- \* *Conference of British Commonwealth Statisticians*, 1951, *Report of Proceedings*.
- \* *Dairying Industry* (formerly *Summary of Dairying Industry*). Statistical Bulletin, monthly and half-yearly; first issue, September 1937.
- Demography*. Bulletin, annually, 1911 to 1967 and 1968 (combined issue). Commencing 1963, excludes details of causes of death, see *Causes of Death*.
- \* *Digest of Current Economic Statistics*. Monthly from August 1959 onward.
- \* *Export Commodity Classification, Australian*. Annually, 1966–67 to 1970–71 (sectional revisions). *Exports, Australian*. Annually, 1958–59 to 1970–71.
- \* *Factories, Principal Statistics, Summary*. Annually, 1948–49 to 1967–68.
- Finance*, Bulletin, 1907 to 1960–61. Commencing 1955–56, issued in two parts—Part I, Public and Private Finance; Part II, Commonwealth Taxation. Commencing 1961–62, issued as five separate bulletins, see *Banking, Finance (2), Insurance, and Taxation*.
- Finance, Commonwealth*. Bulletin, annually, 1961–62 and 1962–63 (combined issue) to 1969–70. (Commencing with the 1970–71 issue, title changed to *Public Authority Finance: Commonwealth Authorities*).
- Finance, State, Territory and Local Government Authorities', and Government Securities*. Bulletin, annually, 1961–62 and 1962–63 (combined issue) to 1967–68.
- † *Finance, Public Authority—Commonwealth Authorities*. Bulletin, annually, 1970–71.
- \* *Food Production and the Apparent Consumption of Foodstuffs and Nutrients, Report on*. Statistical Bulletin, half-yearly, 1946–47 to 1947–48; annually, 1948–49 to 1969–70.
- \* *Fruit Growing Industry* (formerly *Summary of Fruit Growing Industry*). Statistical Bulletin, annually, 1944–45 to 1969–70.
- \* *Import Commodity Classification, Australian*. Annually, 1965–66 to 1970–71 (sectional revisions). *Imports, Australian*. Bulletin, annually, 1967–68 and 1970–71.
- Imports Cleared for Home Consumption*. Annually, 1950–51 to 1970–71.
- Insurance and Other Private Finance (other than Banking and Currency)*. Bulletin, annually, 1961–62 and 1962–63 (combined issue) to 1967–68.
- Labour and Industrial Statistics*. Memoranda and Reports, various, to 1922.
- Labour Report*, 1913 to 1968 and 1969 (combined issue).
- Life Tables, Australian*, 1901–1910. *Australian Joint Life Tables*, 1901–1910.
- Life Tables, Australian*, 1920–1922.
- Life Tables, Australian*, 1932–1934. *Australian Joint Life Tables*, 1932–1934.
- Life Tables, Australian*, 1946–1948.
- Life Tables, Australian*, 1953–1955.
- Life Tables, Australian*, 1960–1962.
- \* *Livestock Numbers* (formerly *Summary of Livestock Statistics*). Statistical Bulletin, annually, 1943 to 1970.
- Local Government in Australia*. July 1919.

- Manufacturing Commodities*. Bulletin, annually, 1963–64 and 1964–65 (combined issue) to 1966–67 and 1967–68 (combined issue).
- Manufacturing Industries*. Bulletins on individual industries, annually, 1936–37 to 1939–40, 1940–41 (issue incomplete) and 1944–45 to 1967–68.
- Manufacturing Industry*. Bulletin, annually, 1963–64 to 1967–68.
- Manufacturing Industry, Australian, Overseas Participation in, Part I.—Overseas Ownership and Part 2.—Overseas Control*, 1962–63 and 1966–67.
- § *Mineral Industry, The Australian* (formerly *Minerals and Metals Bulletin*). Part 2—*Quarterly Statistics* of a quarterly bulletin issued jointly with the Bureau of Mineral Resources.
- Mining Industry, Australian, Overseas Participation in*, annually, 1967, and 1968.
- Monthly Review of Business Statistics*. October 1937 onward.
- Motor Vehicles, Census of, 31st December, 1955*. Bulletins, Nos 1 to 8.
- Motor Vehicles, Census of, 31st December, 1962*. Bulletins, Nos 1 to 9.
- Motor Vehicles, Survey of (1947–48), Results*. Bulletins, Nos 1 to 7.
- National Accounts, Australian (National Income and Expenditure)*, 1948–49 to 1961–62, first issue, mimeographed\*, to 1969–70.
- || *Non-rural Primary Industries*. Bulletin, annually, 1964–65 to 1967–68 and 1968–69 (combined issue).
- Non-rural Primary Industries and Value of Production*. Bulletin, annually, 1962–63 and 1963–64. (Commencing 1964–65 issued as two separate Bulletins, see *Non-rural Primary Industries*, and *Value of Production*).
- Northern Territory Statistical Summary*. Annually, 1960 to 1971.
- \* *Occupation Survey (1945) Results*. Detailed tables.
- Official Year Book of the Commonwealth of Australia*. 1907 to present issue (No. 57). Issues Nos 40 to 51 also published in parts.
- Pocket Compendium of Australian Statistics* (formerly *Statistical Digest*). 1913, 1914, 1916 and 1918 to 1971, annually.
- Population and Vital Statistics*. Bulletins and Reports, various, 1906–1910.
- Primary Industries*. Bulletins, annually, 1950–51 to 1961–62 in two parts—Part I, Rural Industries; Part II, Non-rural Primary Industries and Value of Production. Commencing 1962–63, issued as two separate Bulletins, see *Rural Industries* and *Non-rural Primary Industries and Value of Production*.
- Primary Industries, Australian*. Report prepared for the Empire Producers Conference, Sydney, March 1938.
- Production*. Bulletin, annually, 1906 to 1949–50. From 1936–37 to 1949–50 issued in two parts—Part I, Secondary Industries; Part II, Primary Industries (including Total Recorded Production); thereafter separate Bulletins (see *Primary Industries* and *Secondary Industries*).
- Professional Papers*. Various. A full list appears in Official Year Book No. 13, page 3.
- \* *Publications of the Commonwealth Bureau of Census and Statistics*. Annually since 1950.
- Quarterly Summary of Australian Statistics* (replaced *Monthly Summary of Australian Statistics*). December 1917 onward.
- \* *Retail Establishments, Census of (1947–48), Results*. Bulletins, Nos 1 to 7.
- \* *Retail Establishments, Census of (1948–49), Results*. Bulletins, Nos 1 to 7.
- \* *Retail Establishments, Census of (1952–53), Results*. Bulletins, Nos 1 to 14.
- Retail Establishments, Census of (1956–57), Results*. Bulletins, Nos 1 to 8 (mimeographed\*) and 9 to 15 (printed).
- Retail Establishments and Other Services, Census of (1961–62), Results*. Bulletins Nos 1 to 7 (printed) and 8 and 9 (mimeographed\*).
- \* *Rural Holdings, Classification by Size and Type of Activity, 1959–60*. Bulletins, Nos 1 to 7.
- Rural Holdings, Classification by Size and Type of Activity, 1965–66*. Bulletins, Nos 1 to 7.
- Rural Holdings, Size Classification of, 1955–56*. Bulletins, Nos 1 to 7.
- Rural Industries*. Bulletin, annually, 1962–63 to 1968–69.
- \* *Rural Land Use and Crop Production* (formerly *Summary of Crop Statistics*). Statistical Bulletin, annually, 1943–44 to 1969–70.
- \* *Seasonally Adjusted Indicators*. Bulletin, annually, 1967 to 1971.
- Secondary Industries*. Bulletin, annually, 1950–51 to 1962–63 (commencing 1960–61 issued in two parts—Part I, Factory and Building Operations; Part II, Materials Used and Articles Produced in Factories). Commencing 1963–64 issued as separate bulletins, see *Manufacturing Industry*, *Manufacturing Commodities*, and *Building and Construction*.
- Social Insurance*. Report to the Hon. the Minister for Trade and Customs, 1910.
- Social Statistics*. Bulletin, 1907 to 1915 annually, and 1918.

*Superannuation for the Commonwealth Public Service.* Report to the Hon. the Minister for Home Affairs, 1910.

*Taxation Assessments, Commonwealth.* Annually, 1961–62 to 1969–70.

*Trade, Overseas.* Bulletin, annually, 1906 to 1970–71.

\**Trade, Overseas.* Preliminary Bulletin, annually, 1952–53 to 1970–71, in two parts—Part 1, Exports; Part 2, Imports. (See also *Exports, Australian*; *Imports, Australian*; and *Imports Cleared for Home Consumption*.)

*Transport and Communication.* Bulletin, 1906, 1908 to 1916 annually, 1919 to 1930 annually and 1932 to 1968–69 annually.

|| *Value of Production.* Bulletin, annually, 1964–65 to 1968–69.

*Wealth.* The Private Wealth of Australia and its Growth as ascertained by various methods, together with a Report on the War Census in 1915.

\**Wheat Industry* (formerly *Summary of the Wheat Situation*). Statistical Bulletin, periodically; first issue, July 1936; now issued annually, 1969–70, and 1970–71 (Preliminary), with annual supplement, 1970–71 (Preliminary).

\**Wool Production and Utilisation.* Bulletin, annually, 1952–53 to 1969–70.

\* Distributed by the Commonwealth Statistician—for methods of obtaining other publications still in print see back of this volume

† Previously included in *Secondary Industries, Part I—Factory and Building Operations*.

‡ Prior to 1970–71 issue, title was *Commonwealth Finance*.

§ Copies available from the Bureau of Mineral Resources, Canberra and the Department of National Development, Melbourne and Sydney.

|| Previously included in *Non-rural Primary Industries and Value of Production*.

### Current or recent statistical publications

The Central and State offices of the Commonwealth Bureau of Census and Statistics issue approximately 2,300 publications (600 separate titles) in printed and mimeographed form annually. Information on these publications is contained in *Publications of the Commonwealth Bureau of Census and Statistics*, 1971, available free on request from the Commonwealth Statistician, Canberra. This contains a list of all Bureau publications, a subject index to show the Central Office publications in which information on the various subjects dealt with by the Bureau is to be found, and short descriptions of major Central Office publications. The information on issues in this publication is supplemented in monthly statements. At the end of this Year Book there is a list of the current printed publications of the Central Office of the Bureau: The prices shown after the number and year of issue are, in order, price excluding postage, and price including postage in Australia.

### Commonwealth and State Parliamentary and Departmental Reports and Papers

No comprehensive list of current publications of this nature is available, but the National Library of Australia issues an annual publication *Australian Government Publications*, a list of official publications of the Commonwealth, States and Territories, compiled from records of material received by the Library during the year.

The Australian Government Publishing Service, Canberra, issues a monthly publication *Australian Government Publications* and at irregular intervals Consolidated Lists. These publications list Commonwealth publications currently becoming available or in stock, showing the titles and prices of Parliamentary Papers, Parliamentary Debates (Hansard), records of Parliamentary proceedings, Acts, Statutory Rules, Ordinances, and departmental bulletins and reports issued annually or irregularly.

Australian Government publications may be purchased *through the post or over the counter* from the Commonwealth Sub-Treasury in Brisbane, Adelaide and Hobart and the Deputy Commonwealth Statistician in each State capital; *through the post* from the Assistant Director, Sales and Distribution, Australian Government Publishing Service, P.O. Box 84, Canberra, A.C.T. 2600; and *over the counter* from the A.G.P.S. Book Centres at 113–115 London Circuit, Canberra City; Bank House, 315 George Street, Sydney, N.S.W.; 347 Swanston Street, Melbourne, Vic.; and the Commonwealth Centre, 1–3 St Georges Terrace, Perth, W.A.

The National Library of Australia issues annually a publication *Australian Books*, a reprint of the 1966 issue of which is included on pages 1231–77 of Year Book No. 53. See page 665 of the chapter Education, Cultural Activities and Research for further information concerning the National Library's publicising of Australian publications.





## STATISTICAL SUMMARY: AUSTRALIA

In earlier issues of the Year Book, it was the practice to include in the Statistical Summary figures for every tenth year of the period 1861 to 1901, plus the latest year for which data were available. In each subsequent issue the latest year available was substituted for the year immediately preceding it until the next tenth year had been reached, and the earliest year in the series was eliminated as space was needed. In consequence of this system no single issue of the Year Book contained a continuous yearly series.

In this and recent issues of the Year Book, this defect has been remedied in part by the inclusion of a continuous series back to the year 1941, with earlier tenth years back to 1901 (the National Accounts series on page 1042 has been carried back to 1900-01 in single years). In issue No. 39, pages xxviii-xxix, some of the series are shown for every tenth year from 1861 to 1941. There are, however, discrepancies between the original series and the series now published.

It is intended that in future issues of the Year Book, as circumstances permit, the continuous series will be carried further back and that other series will be added, although it will not be possible to carry all of them back to the earlier years.

Breaks in series, preliminary figures, etc. are indicated by the symbols shown on page xiii of this Year Book.

## STATISTICAL SUMMARY: AUSTRALIA

### DEMOGRAPHY

Year ended 31 December—	Population(a)		Natural increase	Over-seas migration(b)	Marriages		Divorces (c) and judicial separations	Births		Deaths		Infant deaths	
	Males	Females	Persons		No.	Rate(d)		No.	Rate(d)	No.	Rate(d)	No.	Rate(e)
1901	'000	'000	'000	'000	'000		No.	'000		'000		'000	
1911	2,005	1,820	3,825	56.6	17.8	28	7.3	398	103	27.2	46	12.2	10.7
1921	2,382	2,192	4,574	74.3	77.7	39	8.8	509	122	27.2	48	10.7	8.4
1931	2,799	2,712	5,511	82.1	17.3	47	8.6	1,490	136	25.0	54	9.9	9.0
1941	3,333	3,220	6,553	61.9	-10.8	39	6.0	1,969	119	18.2	57	8.7	5.0
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1941	3,599	3,545	7,144	63.3	5.2	75	10.6	3,351	135	18.9	71	10.0	5.3
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1942	3,620	3,581	7,201	61.5	6.2	86	12.0	3,588	137	19.1	75	10.5	5.4
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1943	3,648	3,621	7,270	74.8	1.3	68	9.4	4,686	149	20.6	74	10.3	5.4
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1944	3,683	3,664	7,347	83.7	-2.2	68	9.3	5,691	153	21.0	70	9.5	4.8
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1945	3,722	3,708	7,430	90.3	-2.6	63	8.5	7,213	161	21.7	70	9.5	4.7
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1946	3,767	3,751	7,518	101.7	-15.1	79	10.6	7,235	176	23.6	75	10.0	5.1
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1947	3,828	3,810	7,638	108.9	10.6	76	10.1	8,803	182	24.1	73	9.7	5.2
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1948	3,909	3,884	7,792	101.1	55.1	75	9.7	7,253	178	23.1	77	10.0	4.9
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1949	4,047	3,998	8,046	106.0	150.0	73	9.2	6,626	181	22.9	75	9.5	4.6
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1950	4,191	4,116	8,307	112.4	152.5	76	9.2	7,428	191	23.3	78	9.6	4.7
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1951	4,311	4,217	8,528	111.5	111.4	77	9.2	7,330	193	23.0	82	9.7	4.9
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1952	4,426	4,314	8,740	120.1	94.0	74	8.6	7,110	202	23.4	82	9.5	4.8
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1953	4,503	4,399	8,903	122.0	42.9	71	8.0	8,043	202	22.9	80	9.1	4.7
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1954	4,598	4,492	9,090	120.5	68.2	71	7.9	6,528	202	22.5	82	9.1	4.5
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1955	4,714	4,598	9,312	125.6	97.3	72	7.8	6,782	208	22.6	82	8.9	4.6
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1956	4,829	4,702	9,531	126.0	94.0	72	7.6	6,492	212	22.5	86	9.1	4.6
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1957	4,930	4,814	9,744	135.4	78.7	74	7.6	6,374	220	22.9	85	8.8	4.7
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1958	5,026	4,921	9,947	138.8	65.4	74	7.5	6,994	223	22.6	84	8.5	4.6
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1959	5,132	5,029	10,161	137.8	76.8	74	7.4	7,370	227	22.6	89	8.9	4.9
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1960	5,253	5,139	10,392	141.9	90.1	75	7.3	6,709	230	22.4	88	8.6	4.6
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1961	5,374	5,268	10,643	151.0	61.5	77	7.3	6,751	240	22.8	89	8.5	4.7
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1962	5,470	5,376	10,846	143.9	62.5	79	7.4	7,290	237	22.2	93	8.7	4.8
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1963	5,572	5,484	11,055	140.8	71.6	81	7.4	7,515	236	21.6	95	8.7	4.6
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1964	5,683	5,597	11,280	128.6	99.3	86	7.7	7,967	229	20.6	101	9.0	4.4
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1965	5,794	5,712	11,505	123.1	104.9	94	8.2	8,534	223	19.6	100	8.8	4.1
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1966	5,895	5,816	11,710	118.7	86.9	96	8.3	9,921	223	19.3	104	9.0	4.0
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1967	6,005	5,924	11,929	126.6	91.9	100	8.5	9,746	229	19.4	103	8.7	4.2
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1968	6,129	6,045	12,173	131.4	113.1	106	8.8	10,789	241	20.0	110	9.1	4.3
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1969	6,267	6,179	12,446	143.7	129.0	112	9.1	10,979	250	20.3	106	8.7	4.5
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)
1970	6,402	6,312	12,713	144.5	122.9	116	9.2	12,247	258	20.5	113	9.0	4.6
	(f)	(f)	(f)	(g)	(g)					(h)	(h)	(h)	(h)

(a) At 31 December. (b) Excess of arrivals over departures. Minus sign (-) indicates excess of departures over arrivals. (c) Decrees made absolute, including decrees for nullity of marriage. (d) Number per 1,000 of mean population. (e) Number per 1,000 live births. (f) Excess of births over civilian deaths from September 1939 to June 1947. (g) Excludes movements of defence personnel from September 1939 to June 1947. (h) Excludes deaths of defence personnel from September 1939 to June 1947. (i) Includes Aborigines.

## PRIMARY INDUSTRIES

## AGRICULTURE

Season	Wheat			Oats			Barley			Maize		
	Area	Yield	Average yield	Area	Yield	Average yield	Area	Yield	Average yield	Area	Yield	Average yield
	mil. acres	mil. bus	bus	'000 acres	mil. bus	bus	'000 acres	mil. bus	bus	'000 acres	mil. bus	bus
1901-02	5.1	39	7.5	461	9.8	21.2	75	1.5	20.4	295	7.0	23.9
1911-12	7.4	72	9.6	617	9.6	15.5	116	2.1	17.7	340	8.9	26.3
1921-22	9.7	129	13.3	733	12.1	16.6	299	6.1	20.4	305	7.8	25.7
1931-32	14.7	191	12.9	1,085	15.2	14.0	342	6.3	18.4	269	7.1	26.2
1941-42	12.0	167	13.9	1,460	22.3	15.3	784	18.0	23.0	301	7.4	24.7
1942-43	9.3	156	16.8	1,497	21.5	14.4	451	8.3	18.4	285	6.9	24.2
1943-44	7.9	110	13.9	1,415	17.7	12.5	443	7.6	17.1	283	7.4	26.3
1944-45	8.5	53	6.3	2,034	9.0	4.4	614	5.0	8.2	257	6.5	25.2
1945-46	11.4	142	12.5	1,949	25.8	13.2	699	11.1	15.9	236	5.7	24.3
1946-47	13.2	117	8.9	1,728	15.6	9.0	748	11.6	15.5	260	5.8	22.4
1947-48	13.9	220	15.9	2,105	40.7	19.3	839	20.9	24.9	223	6.2	27.7
1948-49	12.6	191	15.2	1,770	23.6	13.3	1,012	17.8	17.6	182	5.2	28.5
1949-50	12.2	218	17.8	1,748	27.4	15.7	1,040	19.5	18.8	194	6.0	31.0
1950-51	11.7	184	15.8	1,757	25.1	14.3	1,079	22.9	21.2	169	4.7	27.9
1951-52	10.4	160	15.4	2,365	34.5	14.6	1,118	21.9	19.6	170	4.0	23.7
1952-53	10.2	195	19.1	2,764	43.6	15.8	1,377	35.0	25.5	174	5.0	28.5
1953-54	10.8	198	18.4	2,137	33.0	15.4	1,803	41.3	22.9	179	5.1	28.4
1954-55	10.7	169	15.8	2,574	32.8	12.8	1,691	29.4	17.4	170	5.1	29.9
1955-56	10.2	195	19.2	3,354	56.5	16.8	1,894	41.7	22.0	167	4.8	28.4
1956-57	7.9	134	17.1	2,556	35.4	13.8	2,093	49.3	23.5	182	5.5	30.3
1957-58	8.8	98	11.0	2,959	31.4	10.6	2,121	30.5	14.4	184	5.6	30.6
1958-59	10.4	215	20.7	3,974	86.9	21.9	2,381	63.0	26.5	180	6.7	37.4
1959-60	12.2	199	16.3	3,030	46.8	15.5	2,379	34.2	14.3	185	6.7	36.4
1960-61	13.4	274	20.4	3,637	76.1	20.9	2,830	68.0	24.0	185	6.2	33.8
1961-62	14.7	247	16.8	3,097	55.1	17.8	2,383	41.5	17.4	211	7.3	34.7
1962-63	16.5	307	18.6	3,292	68.8	20.9	2,027	39.6	19.5	209	7.5	35.6
1963-64	16.5	328	19.9	3,392	68.2	20.1	2,013	43.4	21.6	215	6.7	31.3
1964-65	17.9	369	20.6	3,497	70.0	20.0	2,064	49.3	23.9	212	6.9	32.4
1965-66	17.5	260	14.8	3,768	60.7	16.1	2,298	41.8	18.2	197	4.9	25.0
1966-67	20.8	467	22.4	4,258	107.1	25.2	2,498	61.6	24.7	201	7.5	37.2
1967-68	22.4	277	12.4	3,380	39.6	11.7	2,611	36.8	14.1	200	7.1	35.6
1968-69	26.8	544	20.3	3,872	94.3	24.3	3,314	72.6	21.9	176	6.8	38.8
1969-70	23.4	388	16.5	3,396	68.7	20.2	3,759	74.9	19.9	191	6.8	35.5
1970-71p	16.0	290	18.1	3,838	88.9	23.2	4,942	103.7	21.0	211		

## AGRICULTURE—continued

Season	Hay			Potatoes			Sugar-cane(a)			Vineyards		All crops
	Area	Yield	Average yield	Area	Yield	Average yield	Area	Yield	Average yield	Area	Wine made	Area
	'000 acres	'000 tons	tons	'000 acres	'000 tons	tons	'000 acres	'000 tons	tons	'000 acres	mil. gal	mil. acres
1901-02	1,688	2,025	1.20	110	323	2.94	87	1,368	15.7	64	5.3	8.4
1911-12	2,518	2,868	1.14	130	301	2.31	101	1,682	16.7	61	5.0	12.1
1921-22	2,995	3,902	1.30	149	388	2.60	128	2,437	19.0	92	8.5	15.4
1931-32	2,635	3,167	1.20	145	397	2.74	242	4,213	17.4	115	14.2	21.2
1941-42	2,758	3,575	1.30	99	333	3.35	255	5,154	20.3	130	15.6	(b)20.5
1942-43	2,359	3,116	1.32	140	484	3.45	241	4,692	19.5	130	19.1	(b)17.5
1943-44	2,044	2,717	1.33	192	599	3.12	229	3,688	16.1	129	19.1	(b)16.1
1944-45	2,409	1,994	0.83	242	881	3.64	226	4,598	20.3	129	13.9	(b)17.7
1945-46	2,757	3,493	1.27	176	646	3.67	236	4,718	20.0	129	24.9	(b)20.6
1946-47	2,006	2,357	1.18	145	544	3.76	227	4,027	17.7	130	32.0	(b)21.3
1947-48	1,970	3,008	1.53	146	498	3.42	222	4,418	19.9	132	32.9	(b)22.5
1948-49	1,580	2,292	1.45	120	460	3.84	266	6,708	25.2	135	32.8	(b)20.9
1949-50	1,605	2,430	1.51	134	471	3.52	281	6,849	24.3	135	32.7	(b)20.8
1950-51	1,377	2,063	1.50	127	412	3.24	272	7,052	25.9	137	26.0	(b)20.1
1951-52	1,549	2,345	1.51	118	509	4.31	282	5,327	18.9	136	35.3	(b)20.0
1952-53	1,761	2,765	1.57	135	431	3.18	280	6,967	24.9	137	30.0	(b)20.7
1953-54	1,935	3,049	1.58	128	548	4.27	340	9,014	26.5	138	31.7	(b)21.5
1954-55	1,984	2,856	1.44	107	468	4.36	374	10,087	27.0	136	24.0	22.3
1955-56	2,241	3,625	1.62	94	402	4.29	373	8,901	23.9	135	22.9	23.0
1956-57	1,861	3,043	1.63	101	519	5.14	370	9,272	25.1	132	30.8	20.0
1957-58	2,237	2,969	1.33	118	575	4.88	376	9,249	24.6	131	33.9	22.2
1958-59	3,018	5,090	1.69	105	575	5.49	370	10,213	27.6	131	32.6	25.6
1959-60	2,105	3,177	1.51	108	579	5.34	314	9,002	28.7	130	28.4	26.1
1960-61	2,973	5,079	1.71	92	451	4.91	341	9,166	26.9	131	33.8	29.6
1961-62	2,274	3,693	1.62	94	526	5.57	387	9,577	24.8	133	41.7	29.6
1962-63	2,720	4,717	1.73	114	667	5.86	402	12,736	31.7	134	29.5	32.1
1963-64	2,602	4,269	1.64	102	562	5.51	418	12,118	29.0	136	37.5	32.0
1964-65	2,793	4,963	1.78	88	508	5.78	470	15,070	32.0	139	38.7	34.7
1965-66	2,780	4,179	1.50	96	639	6.63	503	14,153	28.1	140	34.1	34.5
1966-67	3,496	6,371	1.82	99	643	6.47	557	16,685	29.9	139	41.5	39.6
1967-68	2,800	3,812	1.36	106	658	6.23	553	16,756	30.3	140	44.2	40.2
1968-69	3,955	7,328	1.85	113	798	7.04	568	18,413	32.4	143	51.8	46.9
1969-70	3,192	5,728	1.80	107	750	7.00	526	15,535	29.5	150	63.3	43.9
1970-71	3,344	6,019	1.80	98			545	17,366	31.9	159		39.8

(a) Cane cut for crushing.

(b) Excludes Northern Territory.

**PRIMARY INDUSTRIES—continued**  
**PASTORAL, DAIRYING, ETC.**

Year ended 30 June—	Livestock(a)					Meat(d)					
	Horses	Cattle	Sheep	Pigs	Wool (b)(c)	Butter	Cheese	Beef and veal	Mutton and lamb	Pigmeat	Total meat
	mil.	mil.	mil.	mil.	mil. lb	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
1902 . . . . .	1.6	8.5	72	0.9	539	(e)46	(e)5.3	n.a.	n.a.	n.a.	n.a.
1912 . . . . .	2.3	11.8	97	1.1	798	(e)95	(e)7.1	n.a.	n.a.	n.a.	n.a.
1922 . . . . .	2.4	14.4	86	1.0	723	(e)119	(e)14.6	339	218	50	608
1932 . . . . .	1.8	12.3	111	1.2	1,007	175	14.0	350	307	70	727
1942 . . . . .	1.6	13.6	125	1.4	1,167	168	30.1	534	372	122	1,027
1943 . . . . .	1.5	14.0	125	1.6	1,147	171	36.1	534	413	109	1,057
1944 . . . . .	1.4	14.2	123	1.7	1,169	156	35.8	501	429	114	1,043
1945 . . . . .	1.4	14.1	105	1.6	1,016	142	34.6	461	395	127	984
1946 . . . . .	1.3	13.9	96	1.4	936	150	41.2	407	291	108	805
1947 . . . . .	1.2	13.4	96	1.3	977	143	42.4	488	303	95	885
1948 . . . . .	1.2	13.8	103	1.3	1,005	162	41.5	562	295	90	947
1949 . . . . .	1.1	14.1	109	1.2	1,057	166	43.2	577	320	94	992
1950 . . . . .	1.1	14.6	113	1.1	1,142	174	44.8	607	358	90	1,055
1951 . . . . .	1.0	15.2	116	1.1	1,118	164	44.3	652	274	85	1,011
1952 . . . . .	0.9	14.9	118	1.0	1,080	135	40.6	582	282	85	949
1953 . . . . .	0.8	15.2	123	1.0	1,281	167	46.6	675	395	83	1,153
1954 . . . . .	0.8	15.6	127	1.2	1,245	160	49.1	704	365	84	1,153
1955 . . . . .	0.8	15.8	131	1.3	1,283	191	45.2	720	388	99	1,207
1956 . . . . .	0.8	16.5	139	1.2	1,417	209	38.7	751	380	94	1,225
1957 . . . . .	0.7	17.3	150	1.3	1,564	193	45.2	815	367	89	1,270
1958 . . . . .	0.7	16.9	149	1.4	1,434	176	36.0	791	421	102	1,315
1959 . . . . .	0.6	16.3	153	1.3	1,591	194	43.5	906	492	102	1,501
1960 . . . . .	0.6	16.5	155	1.4	1,680	198	44.9	752	573	101	1,426
1961 . . . . .	0.6	17.3	153	1.6	1,625	182	47.1	633	574	107	1,315
1962 . . . . .	0.6	18.0	158	1.7	1,699	199	55.7	791	587	120	1,498
1963 . . . . .	0.5	18.5	159	1.4	1,673	202	58.7	914	593	114	1,622
1964 . . . . .	0.5	19.1	165	1.5	1,785	204	58.2	985	586	111	1,683
1965 . . . . .	0.5	18.8	171	1.7	1,784	203	61.6	1,010	585	120	1,715
1966 . . . . .	n.a.	17.9	158	1.7	1,663	206	58.6	931	599	133	1,663
1967 . . . . .	0.5	18.3	164	1.8	1,762	218	68.7	865	587	140	1,591
1968 . . . . .	n.a.	19.2	167	2.1	1,770	193	69.4	890	654	147	1,691
1969 . . . . .	n.a.	20.6	175	2.3	1,948	196	73.6	920	669	160	1,749
1970 . . . . .	0.5	22.2	180	2.4	2,036	221	75.1	994	743	172	1,909
1971p . . . . .	n.a.	24.4	178	2.6	1,935	200	76.3	1,038	790	179	2,008

(a) At 31 December of previous year for years to 1942, at 31 March thereafter. (b) In terms of greasy. (c) 1901-02 and 1911-12, year ended previous December; then until 1946-47, year ended March; 1947-48 onwards, year ended June. (d) Carcass weight in terms of fresh meat. (e) Year ended previous December.

## MINERALS

## FORESTRY

Year ended 31 December—					Black and Brown coal		Crude oil	Year ended 30 June—	Sawn output of Aust. grown timber
	Copper(a)	Gold(a)	Lead(a)	Zinc(a)	Iron ore				
	'000 tons	'000 fine oz	'000 tons	'000 tons	mil. tons	mil. tons	mil. bls		mil. super feet
1901 . . . . .	29.4	3,300	n.a.	(b)	n.a.	6.9	..	1902	(c)452
1911 . . . . .	45.3	2,484	221.7	238.1	(b)	10.5	..	1912	(c)605
1921 . . . . .	11.0	758	81.0	139.5	0.7	12.9	..	1922	590
1931 . . . . .	13.6	595	148.4	74.2	(b)	10.6	..	1932	237
1941 . . . . .	22.4	1,497	291.1	247.2	2.4	18.8	..	1942	914
1942 . . . . .	21.1	1,154	261.7	220.7	2.5	19.8	..	1943	856
1943 . . . . .	25.5	751	205.5	181.2	2.6	19.2	..	1944	850
1944 . . . . .	29.8	657	188.8	173.7	2.3	18.7	..	1945	842
1945 . . . . .	26.1	657	162.8	150.3	1.6	18.2	..	1946	895
1946 . . . . .	18.8	824	181.4	172.0	1.8	19.6	..	1947	1,050
1947 . . . . .	14.0	938	192.9	182.5	2.2	21.0	..	1948	1,117
1948 . . . . .	12.6	886	210.2	190.7	2.1	21.5	..	1949	1,184
1949 . . . . .	13.7	889	211.8	191.6	1.5	21.5	..	1950	1,223
1950 . . . . .	17.6	870	225.4	197.8	2.4	23.9	..	1951	1,261
1951 . . . . .	18.1	896	212.0	189.2	2.4	25.4	..	1952	1,393
1952 . . . . .	18.9	980	228.3	196.5	2.9	27.5	..	1953	1,340
1953 . . . . .	37.5	1,075	269.3	239.4	3.3	26.7	..	1954	1,400
1954 . . . . .	41.9	1,118	284.9	252.7	3.5	29.1	..	1955	1,449
1955 . . . . .	47.3	1,049	295.9	256.6	3.6	29.4	..	1956	1,451
1956 . . . . .	54.5	1,030	299.5	278.1	3.9	29.8	..	1957	1,419
1957 . . . . .	59.3	1,084	333.8	318.9	3.8	30.7	..	1958	1,391
1958 . . . . .	75.7	1,104	328.3	293.7	3.9	32.1	..	1959	1,460
1959 . . . . .	95.0	1,085	316.3	275.4	4.1	33.3	..	1960	1,521
1960 . . . . .	109.4	1,087	308.2	317.5	4.4	37.5	..	1961	1,418
1961 . . . . .	95.6	1,076	269.7	311.2	5.3	40.3	..	1962	1,352
1962 . . . . .	107.0	1,069	370.1	337.5	4.8	41.6	..	1963	1,416
1963 . . . . .	113.0	1,024	410.3	351.5	5.5	43.3	..	1964	1,532
1964 . . . . .	104.1	964	374.9	344.6	5.7	46.4	1.2	1965	1,487
1965 . . . . .	90.4	878	362.1	349.2	6.7	52.1	2.6	1966	1,508
1966 . . . . .	109.5	917	364.9	369.3	10.9	55.1	3.4	1967	1,461
1967 . . . . .	90.4	805	375.8	400.5	17.0	58.1	2.8	1968	1,473
1968 . . . . .	107.9	782	382.7	415.7	26.2	63.2	3.1	1969	(e)1,384
1969p(d) . . . . .	122.0	730	391.5	437.4	32.0	65.8	14.1	1970p	1,483
1970p(d) . . . . .	136.6	657	462.6	507.1	42.5	71.6	30.7	1971p	1,457

(a) Metallic content of minerals produced. (b) Less than 0.05. (c) Year ended previous December. (d) Year ended 30 June. (e) Excludes estimated quantity of timber from logs peeled or sliced for veneers.



### SECONDARY INDUSTRIES FACTORIES(a)

Year ended 30 June—	Net value of production(d)							Value of			
	Persons employed (b)	Salaries and wages paid(c)	Chemicals, etc.	Industrial metals, etc.	Textiles, etc.	Clothing	Food, etc.	Paper, etc.	All groups	Plant and machinery(e)	Land and buildings(e)
	Number	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000
	(g)	(g)	(g)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1902(f)									58.2		
1912(f)	14.5	312	55	2.2	24.1	15.0	23.6	8.5	108.3	63.2	65.0
1922	18.0	379	136	6.4	47.2	38.4	54.4	18.0	225.0	156.2	134.6
1932	21.7	337	112	15.8	45.6	13.8	57.4	19.2	222.0	243.1	213.2
1942	27.0	725	360	59.6	239.8	42.0	106.4	34.2	633.0	338.4	312.7
1945	28.9	751	415	47.0	295.2	44.6	124.9	39.3	724.6	367.8	365.2
1946	31.2	745	412	45.2	259.4	44.1	124.0	41.0	704.6	371.1	373.2
1947	34.8	805	474	49.0	292.8	53.9	138.3	52.2	821.7	379.4	386.9
1948	37.4	849	572	57.3	362.6	64.2	156.3	59.2	978.6	427.4	422.3
1949	40.1	890	678	67.1	421.7	71.7	179.6	70.6	1,137.5	493.0	465.5
1950	41.6	917	772	81.3	492.5	85.9	202.0	86.0	1,323.1	571.2	519.1
1951	43.1	969	983	105.4	826.2	109.2	236.6	109.5	1,687.7	673.2	605.6
1952	45.8	978	1,224	127.4	826.2	113.2	282.2	136.4	2,049.7	820.3	719.0
1953	47.7	933	1,270	135.7	842.6	129.7	328.7	158.6	2,165.7	987.1	828.9
1954	49.6	990	1,410	164.6	936.6	157.1	355.8	158.6	2,434.1	1,161.4	966.9
1955	51.1	1,031	1,563	196.3	1,065.9	156.8	395.6	181.1	2,731.0	1,396.6	1,112.0
1956	52.4	1,060	1,707	238.3	1,193.9	163.6	428.9	198.1	3,001.4	1,595.7	1,307.1
1957	53.2	1,063	1,782	238.3	1,281.7	182.9	428.9	217.4	3,244.2	1,834.1	1,519.4
1958	54.0	1,074	1,859	291.3	1,389.0	183.0	449.9	241.4	3,457.4	2,025.5	1,698.1
1959	54.9	1,088	1,941	322.4	1,471.6	191.3	469.1	263.4	3,685.2	2,319.8	1,895.8
1960	56.7	1,132	2,173	360.3	1,700.4	216.7	520.1	298.2	4,161.1	2,443.2	2,129.2
1961	57.8	1,145	2,289	366.1	1,795.9	213.6	542.5	318.2	4,349.8	2,785.6	2,389.1
1962	58.5	1,121	2,287	364.3	1,770.3	211.2	542.5	326.9	4,394.6	3,052.1	2,809.6
1963	59.1	1,168	2,447	411.4	1,954.7	233.8	636.9	350.9	4,795.2	3,286.5	3,006.8
1964	59.4	1,210	2,652	449.5	2,174.0	252.5	706.5	379.7	5,270.0	3,480.7	3,204.7
1965	61.0	1,269	2,994	504.8	2,486.1	279.6	757.1	426.9	5,896.8	3,766.3	3,505.9
1966	61.7	1,294	3,163	542.7	2,647.8	282.8	818.3	459.5	6,251.9	4,154.7	3,776.6
1967	62.5	1,309	3,408	627.6	2,912.9	303.1	892.3	503.3	6,877.0	4,706.8	4,061.2
1968	63.0	1,331	3,666	687.0	3,163.6	315.0	937.5	549.0	7,430.9	4,962.2	4,303.2
1969(h)	38.8	1,320	3,997	636.6	3,249.6	706.3	1,208.3	660.4	7,589.0	n.a.	n.a.

(a) Excludes Northern Territory and Australian Capital Territory before 1 July 1964. (b) Average over whole year; includes working proprietors. (c) Excludes amounts drawn by working proprietors. (d) Value added in process of manufacture (i.e. value of output less value of materials and fuel used). (e) Depreciated or book value at end of year, including estimated value of rented premises and machinery. (f) Year ended previous December. (g) Owing to variation in classification, effective comparison is not possible. (h) Preliminary results of the Manufacturing Census, 1968-69. Direct comparisons with figures for previous years are not possible. (for details, see page 712).

### PRIMARY AND SECONDARY INDUSTRIES NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES(a)

Year ended 30 June—	Agriculture	Pastoral	Dairying	Poultry	Bee-farming	Total rural	Hunting	Forestry
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1902	47.6	54.4	15.2	4.0	0.2	121.4	n.a.	(b) 5.6
1912	77.6	105.4	32.2	8.0	0.2	223.4	n.a.	9.6
1922	163.8	150.2	70.6	18.0	0.2	402.8	n.a.	18.2
1932	99.4	86.0	45.2	11.4	0.2	242.2	3.0	7.8
1942	128.0	170.8	68.6	13.0	0.8	381.2	10.0	20.4
1943	161.2	202.0	84.8	21.1	0.7	469.8	7.1	21.6
1944	165.3	216.8	89.7	25.4	0.8	498.1	13.4	23.0
1945	140.7	196.9	92.4	29.6	1.0	460.6	12.4	23.1
1946	219.1	172.6	99.1	30.3	0.8	521.8	17.1	25.1
1947	206.5	260.4	99.7	29.4	1.7	597.7	18.8	29.4
1948	451.6	387.7	121.1	33.5	1.5	995.4	14.6	35.5
1949	328.7	481.7	135.1	40.4	3.0	989.0	15.6	40.6
1950	437.4	674.2	162.2	44.5	1.5	1,319.8	11.4	46.4
1951	416.3	1,409.6	178.7	49.2	1.7	2,055.5	13.3	56.9
1952	493.4	801.0	207.6	63.1	1.5	1,566.6	13.4	75.8
1953	552.8	987.5	271.5	70.4	2.1	1,884.3	11.2	80.1
1954	536.9	983.4	273.9	69.6	2.9	1,866.7	10.1	88.0
1955	487.8	922.9	271.6	59.6	2.8	1,744.7	9.9	93.2
1956	558.9	893.6	309.8	60.4	3.5	1,826.2	12.1	103.6
1957	509.7	1,195.4	281.6	56.8	4.5	2,048.0	12.0	108.3
1958	489.1	894.5	255.2	54.7	3.1	1,696.6	12.1	106.9
1959	657.9	887.2	283.9	54.7	3.2	1,886.9	12.7	108.7
1960	583.9	1,072.4	304.4	60.8	4.1	2,025.7	13.8	105.5
1961	783.7	916.3	284.3	62.0	2.9	2,049.2	13.2	102.4
1962	733.0	962.7	273.0	49.7	3.2	2,021.6	11.8	95.2
1963	830.4	1,078.7	307.4	52.8	3.0	2,272.3	11.4	96.1
1964	917.4	1,340.6	330.2	61.5	5.1	2,634.8	13.4	99.1
1965	975.2	1,221.3	360.7	50.9	4.1	2,612.2	13.1	107.4
1966	857.9	1,159.5	349.9	62.6	3.5	2,433.4	13.8	111.0
1967	1,209.0	1,181.8	371.9	69.9	3.3	2,836.0	11.9	108.9
1968	899.4	1,044.4	371.3	64.2	3.8	2,383.1	10.5	110.0
1969	1,213.2	1,195.0	381.2	71.2	2.6	2,863.2	10.6	111.8
1970	1,008.7	1,204.4	418.9	84.5	4.4	2,721.0	11.2	118.9

(a) Gross value, 1901 to 1921-22. Before 1922, year ended previous December. (b) Includes Fisheries.



PRIMARY AND SECONDARY INDUSTRIES—continued  
NET VALUE OR PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES(a)—continued

BUILDING  
NEW HOUSES AND  
FLATS COMPLETED(b)

Year ended 30 June—	Fishing	Mining and quarrying (c)	Total, non-rural	Total, primary	Factories	Grand total	Number	Value
	\$m	\$m	\$m	\$m	\$m	\$m	'000	\$m
1902	2.2	44.0	49.6	171.0	(c)58.2	229.2	n.a.	n.a.
1912	2.2	46.6	58.4	281.8	(c)108.3	390.1	n.a.	n.a.
1922	2.8	40.0	61.0	463.8	225.0	688.8	n.a.	n.a.
1932	2.8	27.0	40.6	282.8	222.0	504.8	n.a.	n.a.
1942	3.6	66.8	100.8	482.0	633.0	1,115.0	n.a.	n.a.
1943	3.9	61.5	94.1	563.8	704.0	1,267.8	n.a.	n.a.
1944	3.9	55.2	95.5	593.6	732.5	1,326.0	n.a.	n.a.
1945	4.5	53.7	93.6	554.2	724.6	1,278.8	n.a.	n.a.
1946	5.2	52.5	99.9	621.7	704.6	1,326.4	n.a.	n.a.
1947	6.6	65.0	119.7	717.4	821.7	1,539.2	15.4	29.0
1948	7.0	85.2	142.3	1,137.7	978.6	2,116.3	32.9	72.1
1949	8.3	96.7	161.2	1,150.2	1,137.5	2,287.7	44.3	108.6
1950	8.5	104.7	170.9	1,490.7	1,323.1	2,813.8	52.7	150.9
1951	9.7	142.3	222.2	2,277.6	1,687.7	3,965.4	57.0	184.7
1952	11.5	194.4	295.1	1,861.7	2,049.7	3,911.4	69.3	255.6
1953	13.8	219.3	324.5	2,208.8	2,165.7	4,374.5	80.1	354.1
1954	15.5	209.8	323.4	2,190.1	2,454.1	4,644.2	80.2	394.5
1955	17.5	236.2	356.7	2,101.5	2,731.0	4,832.5	77.6	398.2
1956	17.8	265.0	398.5	2,224.7	3,001.4	5,226.1	82.1	444.2
1957	21.0	280.0	421.3	2,469.2	3,244.2	5,713.5	78.5	452.5
1958	20.8	253.6	393.4	2,090.0	3,457.4	5,547.4	68.4	419.5
1959	22.5	236.7	380.6	2,267.5	3,685.2	5,952.7	74.6	463.0
1960	24.7	252.3	396.2	2,421.9	4,161.1	6,583.0	84.2	527.3
1961	25.6	278.1	419.3	2,468.5	4,349.8	6,818.4	90.0	571.0
1962	28.6	274.5	410.1	2,431.7	4,394.6	6,826.4	94.5	627.4
1963	30.6	291.0	429.2	2,701.5	4,795.2	7,496.7	86.3	593.2
1964	31.7	327.7	471.8	3,126.6	5,270.0	8,396.6	87.7	610.2
1965	38.7	400.1	559.3	3,171.5	5,896.8	9,068.3	96.7	685.8
1966	41.7	443.9	610.4	3,072.9	6,251.9	9,324.0	112.7	823.0
1967	44.6	515.5	681.0	3,517.0	6,877.0	10,394.0	112.8	869.9
1968	54.0	568.1	742.6	3,118.7	7,430.9	10,549.5	111.9	914.8
1969	58.6	700.8	881.6	3,736.2	(e)	(e)	120.2	1,022.8
1970	58.1						130.7	1,182.1
							142.2	1,379.4

(a) Gross value, 1901 to 1921–22. Before 1922, year ended previous December. (b) Series commenced 1945–46. Partly estimated before July 1951, and excludes Northern Territory before July 1954. (c) Year ended previous December. (d) Included in Forestry. (e) Not yet available, see page 715.

## WAGES AND PRICES

Year ended 31 December—	Weekly wage rates adult males(a)	Retail price index numbers, six State capital cities combined(b)	Year ended 31 December—	Weekly wage rates adult males(a)	Retail price index numbers, six State capital cities combined(b)
1901	n.a.	88	1954	101.6	386
1911	n.a.	100	1955	105.2	394
1921	n.a.	(c)168	1956	110.8	419
1931	n.a.	145	1957	112.4	429
1941	38.5	167	1958	114.3	435
1942	41.6	181	1959	122.0	443
1943	42.5	188	1960	125.7	459
1944	42.6	187	1961	129.5	471
1945	42.7	187	1962	129.8	469
1946	45.7	190	1963	133.0	472
1947	49.8	198	1964	140.4	483
1948	55.4	218	1965	144.3	502
1949	59.7	240	1966	152.4	517
1950	71.5	262	1967	159.3	534
1951	85.8	313	1968	173.4	548
1952	96.7	367	1969	183.6p	564
1953	99.2	383	1970	190.8p	586

(a) At 31 December. Base: year 1954 = 100, weighted average. Excludes rural industry. (b) Base: year 1911 = 100. The index numbers are presented as a continuous series, but they give only a broad indication of long-term trends in retail price levels. They are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are: from 1901 to 1914, the 'A' Series Retail Price Index; from 1914 to 1946–47, the 'C' Series Retail Price Index; from 1946–47 to 1948–49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series Index excluding Rent; and from 1948–49 onwards, the Consumer Price Index. (c) November.

## OVERSEAS TRADE

## TOTALS

## PRINCIPAL EXPORTS(a)

Year ended 30 June—	TOTALS		PRINCIPAL EXPORTS(a)					
	Imports	Exports	Wool		Wheat		Flour(b)	
	\$m	\$m	Quantity	Value	Quantity	Value	Quantity	Value
	f.o.b.	f.o.b.	mil. lb(c)	\$m	'000 tons	\$m	'000 short tons	\$m
1902(d)	76	100	387.5	30	543	5.6	97	1.2
1912(d)	122	158	728.1	52	873	12.8	176	2.8
1922	188	256	971.3	96	2,677	57.2	360	11.0
1932	104	216	941.6	74	3,413	38.4	611	7.6
1942	348	338	939.8	112	598	9.2	414	8.4
1943	492	251	628.6	84	604	9.7	342	7.0
1944	489	293	598.6	85	902	16.5	591	13.4
1945	430	311	683.5	92	868	19.5	560	13.5
1946	358	447	930.9	132	334	12.4	519	22.7
1947	419	618	1,454.6	244	326	12.7	765	45.1
1948	679	820	1,132.9	289	1,612	105.6	784	63.6
1949	830	1,085	1,324.9	454	2,224	129.4	855	67.4
1950	1,076	1,227	1,427.4	618	2,101	124.3	771	52.7
1951	1,488	1,964	1,193.7	1,253	2,309	148.3	883	65.8
1952	2,107	1,350	1,041.3	636	1,685	110.6	789	66.0
1953	1,028	1,743	1,207.7	788	1,594	103.9	870	74.8
1954	1,363	1,657	1,206.0	805	966	61.9	761	59.4
1955	1,687	1,548	1,182.8	693	1,691	90.4	656	40.6
1956	1,642	1,564	1,295.8	653	1,903	92.9	667	39.4
1957	1,438	1,986	1,450.8	930	2,440	120.1	750	43.3
1958	1,584	1,636	1,329.7	720	1,060	57.0	460	28.7
1959	1,593	1,623	1,448.7	578	1,463	76.8	447	26.7
1960	1,854	1,875	1,592.6	742	2,444	123.4	536	30.3
1961	2,175	1,938	1,557.7	649	4,098	204.9	658	38.0
1962	1,769	2,155	1,628.7	720	5,442	284.9	579	34.8
1963	2,163	2,152	1,594.3	733	4,071	216.9	524	31.4
1964	2,373	2,782	1,669.6	926	6,796	362.0	685	42.2
1965	2,905	2,651	1,605.3	781	5,624	297.2	572	37.3
1966	2,939	2,721	1,601.5	757	5,075	264.1	390	24.8
1967	3,045	3,024	1,632.1	840	6,403	361.2	357	23.1
1968	3,264	3,045	1,683.0	739	6,396	342.7	381	23.5
1969	3,469	3,374	1,760.6	827	4,814	258.3	350	21.8
1970	3,881	4,132	1,883.2	803	6,777	337.6	329	21.2
1971	4,147	4,379	1,728.3	575	8,953	434.0	306	19.7

(a) Australian produce. (b) Flour, plain white. (c) Greasy equivalent (includes greasy wool, slipes, wool scoured and carbonised, wool exported on skins). (d) Year ended previous December.

## PRINCIPAL EXPORTS(a)—continued

Year ended 30 June—	Butter(b)		Hides and skins	Meats(c)	Fruit(d)	Sugar	Gold	Ores and concentrates	
	Quantity	Value	Value	Value	Value	Value	Value	Value	Value
	mil. lb	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1902(f)	35	2.8	2.6	5.2	0.4	(g)	28.6	..	8.1
1912(f)	102	9.2	6.4	8.6	1.0	(g)	24.0	..	1.3
1922	127	16.0	6.2	11.0	6.0	(g)	7.0	..	0.3
1932	202	20.6	4.6	12.8	9.6	5.0	23.8	..	1.9
1942	130	16.2	12.0	28.2	10.6	5.2	18.4	..	2.5
1943	130	17.1	7.4	21.2	7.0	2.0	(g)	..	3.1
1944	105	13.8	13.5	26.1	10.2	3.0	(g)	..	3.4
1945	94	16.5	13.2	28.2	11.0	3.7	(g)	..	5.6
1946	139	24.8	23.7	28.0	12.2	6.1	52.8	..	9.2
1947	135	25.4	30.9	42.3	19.7	5.4	(g)	..	11.8
1948	187	41.8	24.7	45.1	25.5	6.1	7.7	..	12.3
1949	185	48.3	24.4	59.5	30.3	26.4	(g)	..	21.4
1950	182	50.8	30.3	70.0	30.2	28.3	(g)	..	39.9
1951	123	37.8	54.4	60.8	37.6	29.6	(g)	..	38.9
1952	28	10.2	34.3	71.0	44.4	13.8	14.0	..	25.6
1953	112	40.9	40.3	131.6	61.2	43.3	40.8	..	28.1
1954	90	33.1	38.9	113.8	67.9	63.2	27.5	..	38.2
1955	142	50.0	39.4	127.0	68.0	62.3	27.4	..	51.4
1956	186	58.7	41.8	119.1	67.4	49.4	16.6	..	42.4
1957	173	52.9	48.5	100.1	52.9	57.6	28.5	..	32.7
1958	116	32.3	50.8	110.5	72.0	70.0	12.7	..	43.5
1959	176	50.9	47.1	194.4	73.1	64.3	6.6	..	54.4
1960	175	58.4	63.6	177.0	64.3	53.3	20.4	..	76.6
1961	141	40.9	54.4	144.6	61.1	70.1	79.9	..	87.5
1962	178	48.5	64.3	179.4	73.5	67.8	18.0	..	101.0
1963	179	49.3	73.7	225.7	73.3	91.0	12.9	..	123.1
1964	202	57.0	91.7	243.7	92.3	156.5	14.3	..	143.3
1965	214	67.4	80.1	286.2	86.1	112.7	18.4	0.8	205.0
1966	186	57.7	89.2	287.7	107.3	93.9	24.4	2.7	230.4
1967	230	64.8	85.5	285.5	94.5	100.0	18.1	46.0	
1968	172	47.0	61.9	284.6	104.6	97.6	15.6	103.0	
1969	166	40.5	75.0	290.9	92.4	122.2	22.7	179.5	
1970	218	52.5	86.9	426.1	87.7	116.1	29.4	277.8	
1971	197	48.1	71.2	440.6	99.8	149.6	18.5	374.3	

(a) Australian produce. (b) Includes concentrates and ghee. (c) Includes sausage casings, natural. (d) Includes juices and fruit preparations. (e) Excludes iron ore and iron ore concentrates. (f) Year ended previous December. (g) Less than 0.05.

OVERSEAS TRADE—continued  
PRINCIPAL IMPORTS

Year ended 30 June—	<i>Vegetable foodstuffs, etc.</i>	<i>Apparel, etc.</i>	<i>Oil, etc.</i>	<i>Metals, etc.</i>	<i>Rubber</i>	<i>Paper, etc.</i>
	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.
1902(a)	7.2	21.8	2.4	15.6	1.0	3.2
1912(a)	7.4	32.4	3.2	28.0	2.8	5.2
1922	8.0	62.0	9.4	45.6	3.4	8.8
1932	5.2	30.8	11.0	14.8	1.6	8.8
1942	12.3	65.3	32.4	143.6	6.0	8.7
1943	14.5	59.0	35.0	203.1	4.4	4.7
1944	10.5	77.2	47.5	215.4	6.0	11.8
1945	13.0	90.7	41.3	150.4	3.5	14.8
1946	17.6	63.4	41.5	92.5	5.9	16.3
1947	18.9	97.8	41.3	105.2	10.9	26.8
1948	33.0	192.1	69.5	170.8	9.8	46.8
1949	27.9	218.4	86.4	256.1	12.6	42.1
1950	41.4	199.5	104.8	454.7	21.4	37.8
1951	49.6	277.3	139.7	479.7	59.3	58.0
1952	50.1	407.1	174.9	786.8	68.0	137.5
1953	37.0	96.5	148.5	452.0	17.4	44.9
1954	51.4	227.6	167.0	504.4	23.7	68.2
1955	71.9	253.5	193.8	638.3	34.1	92.8
1956	44.1	222.7	199.3	644.1	44.1	87.2
1957	51.6	182.7	191.1	530.1	33.4	83.5
1958	51.5	217.0	203.4	564.4	33.3	89.8
1959	55.3	193.9	209.0	585.6	33.6	96.1
1960	54.9	222.1	213.5	710.1	48.5	103.8
1961	60.5	264.9	223.3	871.3	47.3	133.8
1962	56.3	208.4	219.8	630.3	35.5	109.6
1963	55.5	233.3	246.3	850.0	46.7	133.5
1964	61.6	234.0	251.5	947.1	51.2	141.7
1965	66.2	272.1	260.1	1,275.2	66.3	156.5

Year ended 30 June—	<i>Food and live animals</i>	<i>Beverages and tobacco</i>	<i>Crude materials, inedible, except fuels</i>	<i>Mineral fuels, lubricants and related materials</i>	<i>Animal and vegetable oils and fats</i>	<i>Chemicals</i>	<i>Manu- factured goods classified chiefly by materials</i>	<i>Machinery and transport equipment</i>	<i>Miscel- laneous manu- factured articles</i>	<i>Com- modities and trans- actions of merchan- dise trade not elsewhere classified</i>
	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.	\$m f.o.b.
1966	110	37	197	252	15	266	590	1,121	220	90
1967	118	38	206	247	15	297	586	1,144	243	110
1968	117	36	224	241	14	309	644	1,250	270	111
1969	128	44	228	252	14	328	688	1,328	298	116
1970	140	48	247	255	16	363	753	1,528	350	124
1971	158	50	235	190	18	410	867	1,644	403	125

(a) Year ended previous December.

## TRANSPORT AND COMMUNICATION

## SHIPPING

Year ended 30 June—	Overseas vessels				Overseas cargo				Interstate vessels—			
	Entrances		Clearances		Discharged		Shipped		Entrances		Interstate cargo shipped	
	No.	Net tonnage	No.	Net tonnage	mil. tons	mil. tons	mil. tons	mil. tons	No.	Net tonnage	mil. tons	mil. tons
		mil. tons		mil. tons	(a)	(a)				mil. tons	mil. tons	(a)
1902	(b)	(b)	(b)	(b)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1912	(c)2,081	(c)5.0	(c)2,093	(c)5.0	n.a.	n.a.	(c)5,000	(c)6.8	n.a.	n.a.	n.a.	n.a.
1922	1,567	4.6	1,544	4.5	2.4	5.8	4,897	6.4	5.5	5.5	5.5	5.5
1932	1,519	5.7	1,538	5.7	3.0	6.7	3,958	5.5	4.0	4.0	4.0	4.0
1942	1,276	5.2	1,268	5.6	5.5	4.2	4,860	6.6	10.0	10.0	10.0	10.0
1943	956	3.8	1,069	4.3	5.1	3.6	3,596	4.6	9.4	9.4	9.4	9.4
1944	1,094	4.5	1,286	5.2	5.9	5.1	3,731	5.2	9.2	9.2	9.2	9.2
1945	1,059	4.5	1,088	4.6	6.1	4.9	3,543	5.1	9.3	9.3	9.3	9.3
1946	1,146	5.3	1,225	5.4	6.2	3.9	3,108	4.4	7.4	7.4	7.4	7.4
1947	1,202	5.2	1,287	5.2	5.6	4.5	3,084	4.7	8.5	8.5	8.5	8.5
1948	1,470	6.1	1,479	5.8	6.9	5.8	2,943	4.2	8.4	8.4	8.4	8.4
1949	1,706	7.5	1,780	7.5	8.4	6.8	3,091	4.7	7.4	7.4	7.4	7.4
1950	1,942	8.7	1,965	8.7	11.3	6.4	3,228	5.3	7.6	7.6	7.6	7.6
1951	1,911	8.6	1,992	8.7	13.1	6.7	3,301	5.8	8.0	8.0	8.0	8.0
1952	2,038	9.0	2,098	9.3	14.4	5.7	3,750	7.9	9.0	9.0	9.0	9.0
1953	1,988	8.7	2,053	8.9	9.7	7.5	4,555	9.2	9.7	9.7	9.7	9.7
1954	2,054	8.9	2,073	8.9	11.3	7.1	4,759	9.6	10.6	10.6	10.6	10.6
1955	2,245	9.9	2,260	10.1	14.4	7.5	4,644	9.4	11.7	11.7	11.7	11.7
1956	2,425	11.2	2,457	11.1	15.9	8.2	4,626	9.5	12.9	12.9	12.9	12.9
1957	2,628	11.8	2,662	11.8	15.3	10.1	4,805	9.5	13.2	13.2	13.2	13.2
1958	2,656	12.4	2,598	12.1	16.6	8.9	5,127	9.8	13.8	13.8	13.8	13.8
1959	2,706	12.9	2,757	13.1	16.9	10.1	5,012	9.5	13.4	13.4	13.4	13.4
1960	2,976	14.5	2,969	14.4	18.7	11.6	5,004	9.5	14.3	14.3	14.3	14.3
1961	3,382	17.3	3,396	17.0	21.1	15.3	4,860	9.6	15.2	15.2	15.2	15.2
1962	3,599	18.9	3,611	18.8	20.3	18.7	5,032	9.8	14.8	14.8	14.8	14.8
1963	3,411	19.0	3,351	18.6	22.8	17.0	4,845	9.7	15.4	15.4	15.4	15.4
1964	3,714	20.7	3,763	20.9	24.7	21.6	5,067	10.1	16.8	16.8	16.8	16.8
1965	3,813	21.7	3,788	21.7	27.7	22.4	5,263	13.2	17.8	17.8	17.8	17.8
1966	3,929	23.0	4,029	23.3	28.3	23.8	5,480	15.1	17.7	17.7	17.7	17.7
1967	3,977	27.4	4,017	27.6	31.3	34.6	4,937	15.3	17.4	17.4	17.4	17.4
1968	3,972	30.1	4,013	30.3	32.3	43.4	5,159	15.7	19.0	19.0	19.0	19.0
1969	4,390	36.4	4,360	36.2	34.5	57.0	5,269	15.8	20.4	20.4	20.4	20.4
1970	4,932	44.0	5,014	44.1	33.4	79.0	4,834	17.7	22.5	22.5	22.5	22.5

(a) Tons weight plus tons measurement. (b) Separate details not available. Total entrances and clearances for year ended December 1901, 4,028 vessels, 6.5 million tons. (c) Year ended previous December.

## GOVERNMENT RAILWAYS(a)

## REGULAR INTERNAL AIR SERVICES

Year ended 30 June—	Passengers					Freight					Mail	
	Route-miles (b)	Train mileage	Passenger journeys	Freight-tonnes carried	Freight-net ton-miles	Miles flown	Embarkations	Passenger miles	Tons up-lifted	Ton-miles	Tons up-lifted	Ton-miles
	'000	mil.	mil.	mil.	mil.	mil.	'000	mil.	'000(c)	mil.(d)	'000(c)	mil.(d)
1902	12.8	38.2	115	15.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1912	16.8	55.2	228	25.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1922	23.4	56.1	335	31.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1932	27.0	63.8	303	26.1	n.a.	0.9	6	3	0.04	n.a.	0.02	n.a.
1942	27.2	88.5	475	38.9	n.a.	7.8	151	76	1.3	1.0	n.a.	0.5
1943	27.2	96.1	518	42.5	n.a.	7.0	135	64	1.1	0.9	2.3	1.5
1944	27.2	91.8	533	42.0	n.a.	9.7	216	100	1.5	0.9	3.6	2.7
1945	27.2	90.2	535	40.8	n.a.	12.6	320	141	2.6	1.3	4.2	2.8
1946	27.2	86.7	546	36.7	n.a.	17.7	509	225	5.6	2.6	2.4	1.7
1947	27.2	85.5	503	37.8	5,605	23.0	850	366	13.7	6.7	1.3	0.7
1948	27.1	87.7	511	40.0	5,934	32.4	1,208	503	28.9	13.4	1.4	0.8
1949	27.0	92.3	507	41.4	6,212	35.2	1,409	566	37.4	17.1	1.8	0.9
1950	27.0	93.4	505	40.6	6,203	36.5	1,500	590	49.4	22.3	2.9	1.4
1951	27.0	88.7	476	40.9	6,277	40.7	1,685	669	59.4	27.1	3.2	1.5
1952	26.8	93.4	501	44.3	6,755	41.8	1,829	722	57.5	26.7	2.7	1.3
1953	26.8	88.7	498	44.0	6,574	39.1	1,706	667	57.6	27.2	2.3	1.2
1954	26.6	93.5	511	46.8	6,953	41.0	1,702	702	69.5	32.7	2.3	1.2
1955	26.6	94.8	517	47.7	7,295	43.5	1,918	766	78.7	37.0	2.3	1.3
1956	26.5	96.2	515	46.8	7,274	43.7	2,020	828	84.4	38.9	2.5	1.4
1957	26.5	95.1	499	47.5	7,463	42.1	2,025	891	75.1	36.3	2.5	1.4
1958	26.4	90.3	494	45.3	6,808	40.5	2,123	899	75.0	33.0	2.6	1.4
1959	26.3	92.7	485	48.0	7,320	40.3	2,235	944	62.8	28.8	2.7	1.5
1960	26.2	92.7	479	51.2	8,006	43.2	2,660	1,133	65.4	29.2	4.8	2.6
1961	26.1	93.0	463	55.4	8,788	42.3	2,639	1,110	63.0	28.2	6.0	3.1
1962	25.6	92.6	461	55.9	8,823	41.2	2,666	1,119	57.2	26.1	6.3	3.2
1963	25.5	92.9	465	55.9	9,253	43.7	2,833	1,221	59.4	28.3	6.5	3.3
1964	25.2	96.5	471	61.7	10,501	49.0	3,257	1,408	63.2	30.5	7.1	3.7
1965	25.0	96.6	464	64.8	11,145	52.3	3,764	1,639	70.0	33.9	7.7	4.1
1966	25.0	94.3	460	64.4	11,038	55.0	4,158	1,831	76.1	37.6	8.6	4.6
1967	25.1	93.7	455	68.5	11,517	56.8	4,425	1,972	82.1	40.1	9.6	5.1
1968	25.1	94.5	453	71.1	12,264	56.7	4,668	2,125	85.1	42.3	9.4	5.2
1969	25.1	93.8	447	75.7	13,126	60.3	5,185	2,402	89.9	45.5	9.9	5.5
1970	25.1	97.1	450	82.4	14,661	66.2	5,911	2,803	100.1	51.0	10.6	6.0

(a) Particulars of train-mileages, passenger-journeys, freight tons carried, and freight net ton-miles refer only to operations for which revenue is received. (b) At end of period. (c) Short tons (2,000 lb). (d) In terms of short tons.



TRANSPORT AND COMMUNICATION—continued  
ROAD TRANSPORT COMMUNICATION

Year ended 30 June—	Tramway, trolley-bus and omnibus services(a) Passenger journeys	Motor vehicles on the register(b)				Telephones				Broadcasting and television licences in force(b)	
		Motor cars and station wagons	Utilities, panel vans, etc., trucks and omnibuses	Motor cycles	Total motor vehicles (including motor cycles)	Postal matter dealt with(c)	Instruments in service (b)	Services in operation (b)(d)	Telegrams (e)	Broadcast listeners'	Television viewers'
	mil. n.a.	'000 n.a.	'000 n.a.	'000 n.a.	'000 n.a.	mil. articles (f)384 (f)698	'000 (f)36 (f)118	'000 (f)96	mil. (f)8.2 (f)13.9	'000	'000
1902 . . .	360										
1912 . . .	569				102	778	259	196	16.8	(g)1	
1922 . . .	589	420	96	72	588	887	485	364	13.9	369	
1932 . . .	(h)1,067	451	250	49	751	1,124	739	531	26.1	1,320	
1942 . . .	1,189	472	255	48	776	1,082	767	540	32.5	1,370	
1943 . . .	1,281	494	274	53	820	1,114	800	557	35.8	1,395	
1944 . . .	1,290	506	291	57	854	1,155	828	578	37.6	1,415	
1945 . . .	1,275	523	333	73	929	1,166	856	608	38.0	1,437	
1946 . . .	1,216	548	378	87	1,013	1,235	905	648	35.7	1,678	
1947 . . .	1,199	589	419	100	1,108	1,307	963	688	36.8	1,704	
1948 . . .	1,185	651	457	118	1,225	1,375	1,028	734	37.9	1,763	
1949 . . .	1,076	764	506	134	1,404	1,466	1,110	795	38.0	1,841	
1950 . . .	1,092	879	555	146	1,580	1,526	1,209	870	37.2	1,885	
1951 . . .	1,019	1,028	588	155	1,770	1,482	1,301	939	29.8	1,961	
1952 . . .	988	1,105	587	148	1,840	1,506	1,383	1,001	25.9	1,986	
1953 . . .	981	1,196	611	141	1,947	1,604	1,476	1,070	25.1	2,042	
1954 . . .	966	1,342	654	133	2,130	1,653	1,587	1,153	25.5	2,035	
1955 . . .	927	1,430	693	123	2,246	1,741	1,704	1,240	25.4	2,089	
1956 . . .	833	1,537	710	118	2,366	1,784	1,814	1,318	24.0	2,107	74
1957 . . .	803	1,661	731	114	2,506	1,895	1,937	1,407	22.9	2,138	291
1958 . . .	778	1,784	755	110	2,649	1,951	2,056	1,491	22.5	2,264	578
1959 . . .	758	1,938	784	102	2,824	1,953	2,164	1,562	22.2	2,283	955
1960 . . .	726	2,070	800	93	2,963	2,048	2,266	1,631	21.8	2,256	1,217
1961 . . .	718	2,201	815	85	3,101	2,101	2,382	1,719	21.6	2,220	1,424
1962 . . .	712	2,381	833	78	3,292	2,202	2,523	1,812	21.8	2,240	1,655
1963 . . .	702	2,595	851	71	3,516	2,342	2,670	1,919	23.4	2,302	1,882
1964 . . .	685	2,811	865	68	3,744	2,443	2,811	2,010	24.3	2,358	2,045
1965 . . .	653	2,975	878	67	3,920	2,556	2,978	2,120	25.0	2,526	2,226
1966 . . .	621	3,140	893	73	4,107	2,683	3,178	2,235	25.6	2,538	2,405
1967 . . .	609	3,349	907	88	4,345	2,648	3,392	2,359	(i)23.4	2,580	2,519
1968 . . .	590	3,551	930	105	4,586	2,624	3,599	2,511	(i)23.3	2,630	2,649
1969 . . .	575	3,780	959	122	4,861	2,725	3,913	2,704	(i)23.2	2,670	2,758

(a) Government and municipal. (b) At end of period. (c) Letters, postcards, letter-cards, newspapers, packets, parcels, and registered articles. (d) All single lines plus one half the number of duplex lines. Until the introduction of duplex services in December 1948, statistics of exchange lines and telephone services were identical. (e) Telegrams despatched to places within Australia and despatched to or received from overseas. (f) Year ended previous December. (g) Year 1923–24. First year licences issued. (h) Tramway passenger journeys only before 1942. (i) Excludes telegrams received from overseas. These particulars are no longer available.

## NATIONAL ACCOUNTS

## GROSS NATIONAL PRODUCT

## GROSS FIXED CAPITAL EXPENDITURE

Year	At current prices			At constant prices(a)			At current prices		At constant prices		
	(b)	(c)	(d)	1953-54 prices(d)	1959-60 prices(d)	1966-67 prices(e)	(f)	(d)	1953-54 prices(d)	1959-60 prices(d)	1966-67 prices(e)
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1900-01	419	..	..	..	..	..	56	..	..	..	..
1901-02	444	..	..	..	..	..	74	..	..	..	..
1902-03	428	..	..	..	..	..	65	..	..	..	..
1903-04	449	..	..	..	..	..	51	..	..	..	..
1904-05	445	..	..	..	..	..	50	..	..	..	..
1905-06	478	..	..	..	..	..	53	..	..	..	..
1906-07	538	..	..	..	..	..	72	..	..	..	..
1907-08	536	..	..	..	..	..	75	..	..	..	..
1908-09	583	..	..	..	..	..	76	..	..	..	..
1909-10	624	..	..	..	..	..	80	..	..	..	..
1910-11	683	..	..	..	..	..	98	..	..	..	..
1911-12	733	..	..	..	..	..	125	..	..	..	..
1912-13	802	..	..	..	..	..	146	..	..	..	..
1913-14	865	..	..	..	..	..	154	..	..	..	..
1914-15	833	..	..	..	..	..	132	..	..	..	..
1915-16	909	..	..	..	..	..	125	..	..	..	..
1916-17	943	..	..	..	..	..	123	..	..	..	..
1917-18	963	..	..	..	..	..	112	..	..	..	..
1918-19	1,089	..	..	..	..	..	146	..	..	..	..
1919-20	1,257	..	..	..	..	..	209	..	..	..	..
1920-21	1,426	..	..	..	..	..	245	..	..	..	..
1921-22	1,378	..	..	..	..	..	261	..	..	..	..
1922-23	1,510	..	..	..	..	..	273	..	..	..	..
1923-24	1,569	..	..	..	..	..	290	..	..	..	..
1924-25	1,722	..	..	..	..	..	303	..	..	..	..
1925-26	1,659	..	..	..	..	..	308	..	..	..	..
1926-27	1,729	..	..	..	..	..	328	..	..	..	..
1927-28	1,739	..	..	..	..	..	329	..	..	..	..
1928-29	1,711	..	..	..	..	..	309	..	..	..	..
1929-30	1,566	..	..	..	..	..	240	..	..	..	..
1930-31	1,288	..	..	..	..	..	166	..	..	..	..
1931-32	1,209	..	..	..	..	..	119	..	..	..	..
1932-33	1,264	..	..	..	..	..	134	..	..	..	..
1933-34	1,356	..	..	..	..	..	156	..	..	..	..
1934-35	1,422	..	..	..	..	..	203	..	..	..	..
1935-36	1,574	..	..	..	..	..	226	..	..	..	..
1936-37	1,717	..	..	..	..	..	253	..	..	..	..
1937-38	1,857	..	..	..	..	..	306	..	..	..	..
1938-39	1,847	1,860	(1,800)	..	..	..	298	(316)	..	..	..
1939-40	..	2,040	..	..	..	..	..	..	..	..	..
1940-41	..	2,174	..	..	..	..	..	..	..	..	..
1941-42	..	2,548	..	..	..	..	..	..	..	..	..
1942-43	..	2,936	..	..	..	..	..	..	..	..	..
1943-44	..	2,986	..	..	..	..	..	..	..	..	..
1944-45	..	2,906	..	..	..	..	..	..	..	..	..
1945-46	..	3,006	..	..	..	..	..	..	..	..	..
1946-47	..	3,234	..	..	..	..	..	..	..	..	..
1947-48	..	3,988	..	..	..	..	..	..	..	..	..
1948-49	..	4,524	4,351	7,328	..	..	..	792	1,350	..	..
1949-50	..	..	5,127	7,893	..	..	..	1,064	1,652	..	..
1950-51	..	..	6,806	8,353	..	..	..	1,524	2,049	..	..
1951-52	..	..	7,310	8,587	..	..	..	1,938	2,194	..	..
1952-53	..	..	8,293	8,515	..	..	..	1,937	1,983	..	..
1953-54	..	..	9,060	9,060	10,519	..	..	2,128	2,128	2,511	..
1954-55	..	..	9,653	9,542	11,141	..	..	2,353	2,294	2,698	..
1955-56	..	..	10,471	10,085	11,714	..	..	2,567	2,380	2,811	..
1956-57	..	..	11,407	10,351	11,946	..	..	2,667	2,380	2,819	..
1957-58	..	..	11,665	10,504	12,206	..	..	2,856	2,499	2,951	..
1958-59	..	..	12,542	11,452	13,118	..	..	3,022	2,614	3,085	..
1959-60	..	..	13,825	12,081	13,825	16,501	..	3,395	2,878	3,395	3,945
1960-61	..	..	14,704	..	14,262	17,045	..	3,661	..	3,559	4,154
1961-62	..	..	15,043	..	14,400	17,249	..	3,710	..	3,560	4,158
1962-63	..	..	16,224	..	15,320	18,389	..	4,009	..	3,832	4,470
1963-64	..	..	17,980	..	16,437	19,634	..	4,499	..	4,227	4,922
1964-65	..	..	19,756	..	17,654	21,026	..	5,239	..	4,778	5,562
1965-66	..	..	20,695	..	17,852	21,378	..	5,681	..	5,040	5,869
1966-67	..	..	22,777	..	19,060	22,777	..	5,969	..	5,117	5,969
1967-68	..	..	24,315	..	..	23,669	..	6,501	..	..	6,322
1968-69	..	..	27,272	..	..	25,633	..	7,203	..	..	6,757
1969-70	..	..	30,107	..	..	27,071	..	7,902	..	..	7,105
1970-71p	..	..	33,028	..	..	28,125	..	8,675	..	..	7,331

(a) For a description of constant price estimates, see *Australian National Accounts*, op. cit. pp 16 and 101. (b) N. G. Butlin, *Australian Domestic Product, Investment and Foreign Borrowing 1861-1938-39*, Cambridge University Press, Cambridge, 1962. Gross domestic product excluding livestock accumulation approximates conceptually gross national product as defined in the Australian National Accounts. (c) Published by the Commonwealth Statistician. Figures prior to 1948-49 are from *National Income and Expenditure 1955-56* and are not strictly comparable with subsequent figures because of a number of definitional changes and statistical revisions; see pages 18-19, 117-20, *Australian National Accounts 1948-49 to 1961-62*, Commonwealth Bureau of Census and Statistics. (d) *Australian National Accounts 1969-70*, Commonwealth Bureau of Census and Statistics, and, for the last five years, the Budget Paper *National Income and Expenditure 1970-71*. The figures of \$1,800m for gross national product and \$316m for gross fixed capital expenditure in 1938-39 are based on a reconstruction of earlier estimates, and are approximately consistent with the present Australian National Account series. Mr B. D. Haig ('1938-39 National Income Estimates', *Australian Economic History Review*, Vol. vii, No. 2, September 1967) has adjusted components of gross national expenditure and imports and exports for changes in prices. If the price indexes implied by Mr Haig's estimates are used to revalue at 1938-39 prices gross national product and gross fixed capital expenditure for 1948-49, values of \$2,384m and \$434m, respectively, are obtained. (e) *Gross National Product and Expenditure at Current and Constant Prices, 1959-60 to 1970-71*. (f) N. G. Butlin, op. cit. For a variety of reasons, Professor Butlin's gross domestic capital formation figures given here differ conceptually from those for gross fixed capital expenditure in the Australian National Accounts.

## PRIVATE FINANCE

## NOTE ISSUE

## BANKING

Year ended 30 June—	Australian note issue(a)	Trading banks		Bank clearings (c)	Savings banks Depositors balances(d)
		Advances (b)	Deposits (b)		
	\$m	\$m	\$m	\$m	\$m
1902 . . . . .	16	188	186	13	62
1912 . . . . .	107	238	300	25	118
1922 . . . . .	103	364	578	65	308
1932 . . . . .	205	522	638	55	396
1942 . . . . .	280	648	965	142	549
1943 . . . . .	382	583	1,233	156	716
1944 . . . . .	373	542	1,389	158	943
1945 . . . . .		503	1,525	149	1,134
Debits to customers accounts(c)					
			(e)296		
1946 . . . . .	400	519	1,397		1,327
1947 . . . . .	405	672	1,445	349	1,320
1948 . . . . .	393	824	1,598	451	1,363
1949 . . . . .	426	966	1,830	514	1,428
1950 . . . . .	463	1,148	2,264	655	1,524
1951 . . . . .	551	1,357	2,826	897	1,675
1952 . . . . .	605	1,656	2,564	866	1,784
1953 . . . . .	657	1,450	2,856	1,100	1,895
1954 . . . . .	688	1,690	3,061	1,127	2,020
1955 . . . . .	726	1,982	3,089	1,123	2,145
1956 . . . . .	745	1,945	2,992	1,123	2,282
1957 . . . . .	763	1,897	3,231	1,250	2,455
1958 . . . . .	775	2,060	3,240	1,282	2,594
1959 . . . . .	790	2,007	3,362	1,432	2,783
1960 . . . . .	843	2,211	3,611	1,737	3,045
1961 . . . . .	839	2,238	3,600	1,654	3,155
1962 . . . . .	856	2,287	3,637	1,848	3,470
1963 . . . . .	869	2,465	4,064	2,028	3,940
1964 . . . . .	870	2,610	4,649	2,318	4,476
1965 . . . . .	862	2,955	5,038	2,653	4,887
1966 . . . . .	849	3,183	5,308	2,672	5,254
1967 . . . . .	938	3,548	5,614	2,978	5,765
1968 . . . . .	1,006	4,020	6,087	3,588	6,222
1969 . . . . .	1,107	4,384	6,706	4,055	6,707
1970 . . . . .	1,216	4,903	7,099	4,891	7,105
1971 . . . . .	1,369	5,317	7,431	5,711	7,635

(a) Last Wednesday in June. (b) June quarter up to and including 1945; weekly average for month of June from 1946 onwards. (c) Weekly average, June month. (d) End of June. (e) Bank clearings, \$179m.

## LIFE INSURANCE(a)

Year ended 31 December(b)—	Ordinary(c)		Industrial		Total	
	Policies	Sum assured	Policies	Sum assured	Policies	Sum assured
1901 . . . . .	'000	\$m	'000	\$m	'000	\$m
1911 . . . . .	414	216	236	10	650	226
1921 . . . . .	484	218	467	20	951	238
1931 . . . . .	730	362	973	60	1,703	422
1941 . . . . .	871	570	1,550	134	2,421	704
1942 . . . . .	1,340	926	2,780	254	4,120	1,180
1943 . . . . .	1,384	956	2,899	268	4,283	1,223
1944 . . . . .	1,433	998	3,026	285	4,459	1,284
1945 . . . . .	1,506	1,071	3,158	306	4,664	1,376
1946 . . . . .	1,587	1,157	3,279	327	4,866	1,484
1947 . . . . .	1,730	1,310	3,429	357	5,159	1,667
1948 . . . . .	1,902	1,481	3,541	386	5,442	1,867
1949 . . . . .	2,071	1,669	3,643	418	5,714	2,087
1950 . . . . .	2,224	1,862	3,725	448	5,949	2,310
1951 . . . . .	2,377	2,094	3,793	477	6,170	2,571
1952 . . . . .	2,554	2,424	3,843	507	6,396	2,931
1953 . . . . .	2,731	2,757	3,873	541	6,604	3,298
1954 . . . . .	2,893	3,105	3,881	571	6,774	3,677
1955 . . . . .	3,033	3,482	3,827	594	6,860	4,076
1956 . . . . .	3,184	3,942	3,766	615	6,949	4,556
1957 . . . . .	3,319	4,447	3,702	631	7,021	5,077
1958 . . . . .	3,446	5,067	3,615	645	7,061	5,712
1959 . . . . .	3,577	5,747	3,531	657	7,108	6,404
1960 . . . . .	3,710	6,571	3,443	665	7,154	7,236
1961 . . . . .	4,110	7,690	3,340	686	7,450	8,376
1962 . . . . .	4,201	8,743	3,199	707	7,400	9,450
1963 . . . . .	4,291	9,854	3,076	743	7,366	10,597
1964 . . . . .	4,401	11,010	2,953	777	7,354	11,787
1965 . . . . .	4,539	12,481	2,851	823	7,390	13,304
1966 . . . . .	4,705	14,057	2,755	871	7,460	14,928
1967 . . . . .	4,873	15,750	2,644	918	7,517	16,668
1968 . . . . .	5,051	17,762	2,603	981	7,654	18,743
1969(d) . . . . .	5,251	20,357	2,561	1,041	7,812	21,397
1970(d)(e) . . . . .	5,428	23,245	2,530	1,114	7,958	24,360
1970(d)(e) . . . . .	5,622	27,460	2,496	1,216	8,117	28,676

(a) Existing business in Australia. (b) Companies' financial years which ended during the year. (c) Includes superannuation business. (d) From 1 July includes business of the Government Insurance Office of New South Wales and the Queensland State Government Insurance Office, but excludes Papua and New Guinea business. (e) Figures relate to end of December and are derived from monthly figures.

## PUBLIC FINANCE

Year ended 30 June—	COMMONWEALTH				STATE				GOVERNMENT SECURITIES ON ISSUE(a)				
	Consolidated revenue fund		Net loan fund expenditure (b)	Taxation collections	Consolidated revenue fund		Net loan expenditure (b)	Taxation collections	Commonwealth	State	Total	Overseas	In Australia
	Revenue	Expenditure			Revenue	Expenditure							
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
1902 . . . . .	23	8		18	56	58	19	5		429	569	n.a.	n.a.
1912 . . . . .	41	29	2	32	83	82	33	11	12	557	569	388	181
1922 . . . . .	128	128	10	99	170	175	67	36	708	1,039	1,747	823	924
1932 . . . . .	143	143	8	109	199	242	12	65	692	1,800	2,492	1,320	1,172
1942 . . . . .	420	420	426	362	305	299	17	115	1,340	2,038	3,378	1,312	2,066
1943 . . . . .	589	589	806	517	337	333	8	53	2,117	2,013	4,131	1,308	2,823
1944 . . . . .	684	684	755	610	338	334	6	43	2,850	1,994	4,844	1,262	3,582
1945 . . . . .	754	754	532	679	338	334	12	44	3,355	2,008	5,364	1,231	4,133
1946 . . . . .	782	782	319	709	332	331	14	50	3,670	2,005	5,675	1,142	4,533
1947 . . . . .	863	863	98	774	346	350	48	57	3,733	2,044	5,777	1,130	4,647
1948 . . . . .	932	932	26	848	394	398	75	64	3,702	2,119	5,821	1,117	4,704
1949 . . . . .	1,109	1,109	—9	952	452	456	102	73	3,685	2,202	5,887	1,088	4,798
1950 . . . . .	1,161	1,161	85	1,018	521	525	147	83	3,731	2,367	6,098	1,099	4,999
1951 . . . . .	1,684	1,684	101	1,447	613	613	257	103	3,777	2,619	6,396	1,067	5,329
1952 . . . . .	2,034	2,034	63	1,848	777	783	395	126	3,838	2,993	6,830	1,113	5,717
1953 . . . . .	2,080	2,080	71	1,783	876	877	322	142	3,893	3,288	7,181	1,142	6,038
1954 . . . . .	2,046	2,046	83	1,810	941	935	335	161	3,964	3,573	7,537	1,165	6,372
1955 . . . . .	2,135	2,135	66	1,882	991	998	321	179	3,998	3,846	7,844	1,216	6,628
1956 . . . . .	2,277	2,277	88	2,014	1,052	1,082	312	196	4,031	4,121	8,151	1,269	6,882
1957 . . . . .	2,624	2,624	88	2,208	1,154	1,168	317	229	3,957	4,396	8,353	1,216	7,137
1958 . . . . .	2,648	2,648	90	2,338	1,210	1,224	314	256	3,670	4,686	8,356	1,248	7,108
1959 . . . . .	2,592	2,592	132	2,283	1,280	1,295	338	276	3,512	4,988	8,499	1,319	7,180
1960 . . . . .	2,877	2,877	119	2,519	1,399	1,404	357	320	3,334	5,301	8,635	1,389	7,246
1961 . . . . .	3,277	3,277	83	2,871	1,511	1,513	384	335	3,215	5,630	8,845	1,413	7,433
1962 . . . . .	3,283	3,283	182	2,858	1,609	1,617	395	353	3,119	5,963	9,082	1,424	7,658
1963 . . . . .	3,371	3,371	274	2,907	1,694	1,696	405	391	3,121	6,314	9,434	1,522	7,912
1964 . . . . .	3,809	3,809	226	3,247	1,829	1,829	438	448	3,172	6,691	9,863	1,545	8,318
1965 . . . . .	4,418	4,418	167	3,819	1,947	1,965	477	493	3,134	7,091	10,225	1,529	8,695
1966 . . . . .	4,879	4,879	(c)260	4,221	2,095	2,120	492	536	3,145	7,495	10,639	1,505	9,134
1967 . . . . .	5,228	5,228	(c)450	4,492	2,287	2,290	516	601	3,275	7,934	11,209	1,532	9,677
1968 . . . . .	5,760	5,760	(c)655	4,953	2,463	2,469	540	684	3,600	8,317	11,917	1,558	10,358
1969 . . . . .	6,086	6,086	(c)236	5,529	2,688	2,699	574	783	3,682	8,831	12,512	1,698	10,815
1970 . . . . .	6,979	6,979	(c)446	6,382	3,010	3,028	615	873	3,885	9,320	13,205	1,580	11,625
1971 . . . . .	7,838	7,838	(c)523	7,183	3,465	3,491	628	911	3,801	9,691	13,492	1,546	11,946

(a) At 30 June. Expressed in Australian currency equivalents at ruling rates of exchange.  
(c) Includes expenditure financed under the United States Defence Credits Arrangements.

(b) Loan expenditure on works and services.

SOCIAL  
PENSIONS, BENEFITS, ETC.

Year ended 30 June—	Age and invalid pensions		Child endowment		Widows' pensions		Unemployment benefits	
	Pensioners (a)	Amount paid	Children endowed (a)	Endowment paid	Pensioners (a)	Amount paid	No. on benefit—weekly average	Amount paid
	'000	\$m	'000	\$m	'000	\$m	'000	\$m
1902 . . . . .	90	4.3						
1912 . . . . .	147	10.8						
1922 . . . . .	261	22.3						
1932 . . . . .	341	38.5	910	22.6				
1942 . . . . .	331	44.6	908	23.3	38	4.7		
1943 . . . . .	320	43.4	922	(b)24.5	42	5.6		
1944 . . . . .	316	43.4	939	24.1	44	5.9		
1945 . . . . .	333	53.9	965	36.0	45	6.5	6	1.0
1946 . . . . .	364	58.8	1,007	(b)39.7	43	6.7	9	1.8
1947 . . . . .	381	73.1	1,050	38.9	43	7.8	4	0.7
1948 . . . . .	403	83.4	1,105	48.6	43	8.8	2	(c)
1949 . . . . .	414	89.1	1,836	(b)60.7	43	8.8	13	2.5
1950 . . . . .	417	99.0	2,389	87.2	42	9.7	1	(c)
1951 . . . . .	426	119.6	2,518	93.2	41	11.2	2	(c)
1952 . . . . .	451	144.8	2,624	(b)106.5	41	12.7	30	9.1
1953 . . . . .	478	162.6	2,717	101.5	41	13.2	14	5.0
1954 . . . . .	510	176.0	2,789	105.1	42	13.7	4	1.4
1955 . . . . .	535	203.3	2,876	(b)120.8	43	15.4	4	1.4
1956 . . . . .	554	218.4	2,978	114.1	45	17.7	12	4.2
1957 . . . . .	574	243.2	3,074	117.5	47	19.7	24	9.8
1958 . . . . .	598	259.1	3,172	(b)135.1	50	21.6	28	11.9
1959 . . . . .	619	294.0	3,252	125.1	52	24.3	21	9.0
1960 . . . . .	651	315.9	3,340	(b)148.6	55	26.9	22	8.9
1961 . . . . .	691	360.5	3,420	132.8	57	30.2	53	25.3
1962 . . . . .	711	375.5	3,458	135.4	58	31.4	40	21.3
1963 . . . . .	725	399.9	3,631	(b)168.8	62	41.6	26	13.5
1964 . . . . .	736	426.6	3,711	172.8	65	47.0	14	6.8
1965 . . . . .	744	442.4	3,763	176.4	69	50.0	15	7.8
1966 . . . . .	764	481.8	3,835	(b)199.3	73	56.4	21	11.2
1967 . . . . .	797	514.0	3,891	187.9	75	61.1	21	11.2
1968 . . . . .	827	558.6	3,996	193.3	78	69.1	18	9.3
1969 . . . . .	913	642.0	4,079	(b)220.1	87	81.8	13	8.9
1970 . . . . .	942	702.3	4,156	198.5	90	90.5	15	10.8

(a) At 30 June.  
than \$0.05m.

(b) Five 12-weekly payments made during the year instead of the normal four.

(c) Less



## SOCIAL—continued

## PENSIONS, BENEFITS, ETC.—continued

Year ended 30 June—	Hospital and nursing home benefits— amount paid	Medical benefits— amount paid	Phar- maceutical benefits— amount paid	Total Common- wealth expenditure on pensions, benefits, etc.(a)	War pensions		Service pensions	
					No.(b)	Amount paid	No.(b)	Amount paid
	\$m	\$m	\$m	\$m	'000	\$m	'000	\$m
1902 . . . . .	..	..	..	4.3	..	..	..	..
1912 . . . . .	..	..	..	12.1	225	14.1	..	..
1922 . . . . .	..	..	..	23.0	274	14.9	..	..
1932 . . . . .	..	..	..	61.8	220	15.0	14	1.2
1942 . . . . .	..	..	..	73.2	227	16.8	13	1.3
1943 . . . . .	..	..	..	78.3	245	20.8	13	1.3
1944 . . . . .	..	..	..	78.8	281	22.9	13	1.3
1945 . . . . .	..	..	..	106.4	360	26.6	13	1.6
1946 . . . . .	2.2	..	..	124.0	395	30.2	14	1.8
1947 . . . . .	8.8	..	..	137.2	416	32.7	16	2.5
1948 . . . . .	8.9	..	..	161.6	440	37.9	16	2.7
1949 . . . . .	11.8	..	..	185.6	471	42.1	16	2.9
1950 . . . . .	12.6	..	0.1	230.0	503	53.1	17	3.0
1951 . . . . .	13.1	..	5.9	275.2	525	66.7	17	3.6
1952 . . . . .	13.4	2.1	15.4	331.0	544	72.6	19	4.5
1953 . . . . .	14.4	3.5	14.4	353.1	564	78.1	21	5.4
1954 . . . . .	16.7	7.2	18.5	378.6	584	87.8	22	6.0
1955 . . . . .	18.6	13.5	21.5	429.7	600	91.3	35	8.3
1956 . . . . .	19.1	14.6	23.8	447.8	614	95.6	39	9.8
1957 . . . . .	19.6	18.3	23.4	495.0	629	106.6	42	11.3
1958 . . . . .	21.6	20.6	30.1	556.5	643	109.0	44	12.4
1959 . . . . .	29.6	23.2	41.9	596.7	652	117.5	46	13.5
1960 . . . . .	37.2	26.8	48.7	661.2	662	132.6	50	15.6
1961 . . . . .	41.3	28.4	55.8	730.4	671	135.1	58	19.4
1962 . . . . .	44.4	30.6	70.4	758.6	671	140.7	62	21.7
1963 . . . . .	47.3	32.6	76.9	832.7	669	154.5	65	24.2
1964 . . . . .	56.2	34.4	78.8	890.4	660	153.5	65	25.5
1965 . . . . .	58.8	44.6	82.2	941.6	647	170.5	66	28.2
1966 . . . . .	60.7	54.6	91.8	1,031.1	632	161.7	67	29.1
1967 . . . . .	67.4	58.2	101.3	1,075.0	617	164.4	69	31.8
1968 . . . . .	74.8	62.5	105.1	1,162.3	601	182.8	67	34.1
1969 . . . . .	85.9	66.5	118.4	1,341.8	585	183.5	74	39.9
1970 . . . . .	111.4	76.1	136.7	1,477.2	570	191.4	77	43.7
1971 . . . . .	122.8	115.5	160.3					

(a) National Welfare Fund items only, including expenditure for all years on pensions, benefits, etc., which subsequently became payable from the National Welfare Fund. In addition to the items shown in the preceding columns, the tables include expenditure on—the rehabilitation service; milk for school children; tuberculosis campaign; sickness, special and funeral benefits and some miscellaneous welfare and health services. Excludes war and service pensions, telephone rental concessions for pensioners, and some minor welfare and health services. (b) At 30 June.

## EDUCATION

## POLICE AND PRISONS

Year(a)	Schools				Universities		Police and Prisons		
	Government		Non-government		Number	Students	Police	Prisons	Convicted prisoners
	Schools	Pupils	Schools	Pupils					
1902 . . . . .	'000	'000	'000	'000		'000	'000	No.	'000
1912 . . . . .	7.2	637	2.4	144	4	1.9	5.9	n.a.	4.2
1922 . . . . .	8.4	663	1.9	164	5	3.8	6.6	101	3.4
1932 . . . . .	9.6	837	1.7	202	6	7.8	7.0	92	3.0
1942 . . . . .	10.2	934	1.8	221	6	9.9	8.6	85	4.1
1943 . . . . .	9.0	868	1.8	250	6	10.6	9.7	71	3.5
1944 . . . . .	8.8	874	1.8	264	6	11.4	9.6	69	3.5
1945 . . . . .	8.7	878	1.8	275	6	14.7	9.4	70	3.9
1946 . . . . .	8.4	875	1.8	273	6	17.8	9.4	70	3.9
1947 . . . . .	8.3	887	1.8	277	7	25.0	9.9	70	3.6
1948 . . . . .	8.2	906	1.9	281	7	30.0	10.2	73	3.8
1949 . . . . .	8.0	928	1.8	281	7	31.9	10.6	72	3.5
1950 . . . . .	7.9	971	1.8	293	8	31.1	11.1	71	3.8
1951 . . . . .	7.8	1,027	1.9	310	8	30.0	11.5	70	4.0
1952 . . . . .	7.6	1,078	1.9	326	8	31.1	11.9	70	4.2
1953 . . . . .	7.6	1,145	1.9	348	8	29.1	12.6	69	4.8
1954 . . . . .	7.6	1,206	2.0	366	9	28.3	12.7	70	4.8
1955 . . . . .	7.6	1,275	2.0	388	9	28.9	12.6	71	4.8
1956 . . . . .	7.7	1,337	2.1	410	9	30.3	12.9	72	5.1
1957 . . . . .	7.7	1,427	2.1	432	9	34.0	13.5	73	6.0
1958 . . . . .	7.8	1,498	2.0	453	9	36.6	14.1	73	6.4
1959 . . . . .	7.8	1,560	2.0	474	10	41.5	14.5	73	6.6
1960 . . . . .	7.9	1,613	2.1	492	10	47.2	14.9	74	6.6
1961 . . . . .	7.9	1,662	2.1	511	10	53.4	15.3	77	6.8
1962 . . . . .	7.9	1,711	2.1	527	10	57.7	15.9	75	7.2
1963 . . . . .	7.9	1,754	2.2	540	10	63.3	16.4	74	7.4
1964 . . . . .	7.8	1,799	2.2	553	10	69.1	16.7	73	7.7
1965 . . . . .	7.8	1,855	2.2	565	10	76.2	17.2	74	7.7
1966 . . . . .	7.8	1,919	2.2	580	11	83.3	17.6	74	7.7
1967 . . . . .	7.7	1,991	2.2	593	12	91.3	18.4	76	8.1
1968 . . . . .	7.6	2,055	2.2	601	14	95.4	19.0	75	8.7
1969 . . . . .	7.5	2,114	2.2	603	14	101.5	19.7	79	8.8
1970 . . . . .	7.5	2,160	2.2	608	15	109.7	20.1	74	9.2
						116.8	20.3	77	9.3

(a) Years ended at varying dates for education statistics. Years ended 30 June for Police and Prisons.



## CHRONOLOGICAL TABLE

### CHIEF EVENTS IN AUSTRALIA SINCE 1955

NOTES. In issues of the Year Book up to No. 48 (*see* No. 48, page 1201) this table covered events back to the establishment of settlement in Australia in 1788. Later issues up to No. 50 (*see* No. 50, page 1289) covered events back to 1945. This issue covers the years 1955 to 1970 and the first half of 1971.

For each earlier year this Table rarely contains more than two or three items; for recent years, however, in order to provide a wide cover of events, etc., it includes a much greater number. Both the nature of the Table and considerations of space render necessary a continual reduction in these items, and for more information the reader should therefore consult earlier issues.

- 1955 First power generated by Snowy Mountains Hydro-electric Authority. Australian population reached 9,000,000. Cocos (Keeling) Islands became Territory under authority of Commonwealth.
- 1956 Amendment to Conciliation and Arbitration Act altered the structure of the arbitration machinery by separating judicial functions from conciliation and arbitration functions.
- 1957 High Court ruled that interstate vehicles could not be compelled to register in New South Wales, but upheld validity of Victorian tax on commercial vehicles, including those engaged in interstate trade, imposed solely for the maintenance of roads. National Capital Development Commission set up to co-ordinate development of Canberra.
- 1958 Prime Minister officially opened Australia's first nuclear reactor at Lucas Heights, near Sydney. Christmas Island (Indian Ocean) transferred to Australian Administration.
- 1959 Annual Holidays Act, 1944-1958 provided for three weeks' annual holiday for all New South Wales workers. Population reached 10,000,000.
- 1960 Provision made for Social Service benefits to be paid to Australian Aborigines. *Commonwealth Banks Act* 1959 and *Reserve Bank Act* 1959 proclaimed (*see* page 472). National Service training suspended. Commonwealth Government announced special economic measures designed to counter inflationary trend and safeguard overseas funds.
- 1961 Commonwealth *Matrimonial Causes Act* 1959 unifying State Acts became operative (*see* page 434). Oil discovered in south-west Queensland. Australian population census taken. Iron ore deposits estimated at 1,800 million tons discovered at Pilbara (Western Australia).
- 1962 Commonwealth and Western Australian Electoral Acts amended to provide for votes for Aborigines. Aborigines exercised voting rights in Northern Territory for first time.
- 1963 Approval given to agreement for United States to operate a naval communications station at North West Cape, Western Australia. Australian population reached 11,000,000.
- 1964 R.A.N. Destroyer *Voyager* sunk in collision off Jervis Bay with loss of eighty-two lives. New South Wales Government employees granted four weeks' annual leave. Moonie to Brisbane oil pipeline opened and Australia's first commercial oil production started. Northern Territory Legislative Council passed legislation removing discrimination against Aborigines. Australian forces saw action in Malaysia. Resumption of National Service Training and establishment of special Reserve Forces announced (*see* page 89). *National Service Act* 1964 passed.
- 1965 Full High Court judgement on intra-state airlines case held that intra-state services need to hold both a State licence and a Commonwealth licence. Martin Report on tertiary education tabled in House of Representatives. Economic sanctions imposed on Rhodesia.
- 1966 The New Zealand-Australia Free Trade Agreement came into force. Mr Harold Holt sworn in as Prime Minister. Australia adopted dollar-cent system of decimal currency. Immigration laws amended to provide for relaxation of restrictions on entry of persons of non-European race (*see* page 147). Member for Australian Capital Territory given full voting rights. Commercial oilfield declared at Barrow Island (W.A.). Australia joined eight other nations in forming Asian and Pacific Co-operation Council (ASPAC). 1966 census taken. Permanent employment of married women by Commonwealth Government proclaimed. First direct satellite telecast between Britain and Australia.

- 1967 Worst bushfires in history of Tasmania caused loss of 51 lives. SEACOM communications cable linking Australia with south-east Asia opened. First direct satellite telecast from North America to Australia. 36th Session of International Statistical Institute held in Sydney. *Trade Practices Act* 1965-1967 came into force. Daylight saving became effective in Tasmania. Australian Resources Development Bank formed. Government decision not to devalue Australian dollar with pound sterling announced. Australia launched its first satellite at Woomera. Senate select committee recommended that Australia change over to metric system of weights and measures. Prime Minister, Rt Hon. Harold Holt, disappeared while swimming off Portsea, Victoria; Rt Hon. J. McEwen sworn in as Prime Minister.
- 1968 Uniform Commonwealth-State censorship laws came into force. Senator J. G. Gorton elected leader of Liberal Party and sworn in as Prime Minister. Twelve-mile fishing limit around Australia, Nauru, Papua and New Guinea, and Cartier Islands operated from 30 January. Nauru became an independent nation on 31 January. New Victorian stamp duty on receipts. Joint Commonwealth-State off-shore petroleum legislation operated from 1 April. Population reached 12,000,000. Northern Territory member in House of Representatives given full voting rights. Vietnam Medal for Australian Armed Forces instituted. An interim council responsible for the planning and construction of the National Art Gallery created. Two pulsars, mysterious radio sources in the Milky Way, discovered by the Mills Cross radio telescope. The National Library of Australia was opened by the Prime Minister. The United States Presidential Unit Citation presented to the 6th Battalion R.A.R. *Privy Council (Limitation of Appeals) Act* 1968, which makes the High Court of Australia the final court of appeal in all issues involving Commonwealth law and jurisdiction, came into operation. Announcement of a five year \$1,000 million development plan for Papua and New Guinea, with the basic aim of developing the territory economically for self-determination. An earthquake devastated the town of Meckering in Western Australia. The first heart transplant in Australia was performed in Sydney. Commonwealth legislation introduced to establish a fund of \$4.65 million to enable Aborigines to set up in business, and to provide a non-repayable grant of \$3.65 million to the States for Aboriginal advancement. An Ordinance to prevent the takeover of life insurance companies registered in the Australian Capital Territory became operative.
- 1969 The Australian stock exchanges took steps to permit differential voting rights on the shares of listed companies to prevent overseas takeovers. Fifteen died and more than 200 houses were destroyed in disastrous fires in Southern Victoria. Cannon from Captain Cook's ship the *Endeavour* were found in Northern Queensland waters. The Sydney-Melbourne express train the *Southern Aurora* collided head-on with a goods train at Violet Town, Victoria, causing loss of life and extensive damage to both trains. Australia's first natural gas pipeline from Roma to Brisbane was opened. Natural gas entered the Melbourne metropolitan system for the first time. A receipts tax in Tasmania became operative. Sir Paul Hasluck was sworn in as Governor-General. The *Copyright Act* 1968 became operative and at the same time Australia became a party to the Universal Copyright Convention and to the Brussels revision of the Berne Copyright Convention. The Commonwealth Government decided that Camp Hill would be the site for the new and permanent Parliament House in the National Capital. The H.M.A.S. *Melbourne* collided with the destroyer U.S.S. *Evans*, cutting that ship in half, during a SEATO exercise in the South China Sea, with the loss of fifty-seven American seamen. Five power (Australia, New Zealand, United Kingdom, Malaysia and Singapore) talks on the future defence of Malaysia and Singapore were held in Canberra. The Arbitration Commission handed down its decision on equal pay for women (see page 261). Transport Ministers agreed that all new motor vehicles after July 1970 are to be fitted with air pollution control devices. The High Court ruled that the States had no rights or jurisdiction over territorial waters adjacent to their coastline or over the sea-bed. Australian National Line ship, the freighter *Noongah* sank during a gale off the northern N.S.W. coast with the loss of 21 lives. A new Australia-New Zealand defence pact announced, involving standardisation in logistics and planning. Wiltshire Report on the Colleges of Advanced Education tabled in Parliament. Reports of the Senate Select Committees on Medical and Hospital Costs, and on Air Pollution tabled in the Senate. Bass Strait under-sea oil piped to shore for the first time. Federal elections held and Liberal-Country Party coalition returned with a majority of 7. Construction of the transcontinental standard gauge rail link completed at Broken Hill. The Prime Minister announced new rail construction schemes including the construction of a new standard gauge rail link to Alice Springs. The Commonwealth Conciliation and Arbitration Commission's decision in the National Wage Case 1969 increased total award wages by 3 per cent and the minimum wage for adult males by \$3.50 per week (see page 260).



1970 *January.* The *Patents Act* 1969 came into effect; it conferred on the Commissioner of Patents, power to require an applicant to elect whether he wishes to have his application examined. Design rules relating to seat belts, seat belt anchorages and hydraulic brake hose for motor vehicles came into effect. A Commonwealth Secondary School Scholarship Scheme for Aborigines beyond school leaving age was announced. The cyclone 'Ada' caused severe damage off the northern Queensland coast; many island resorts devastated. The Federal Government imposed controls on the export of Australian natural gas.

*February.* The High Court decided that the Victorian and Western Australian stamp tax, receipt tax or turnover tax, was illegal; the Prime Minister announced that legislation would be introduced to enable the Federal Government to collect the tax on behalf of the States. The *Indian-Pacific* rail passenger service inaugurated. Australia signed the Nuclear Non-Proliferation Treaty.

*March.* A High Court judgement in Sydney upheld the validity of the Trade Practices Tribunal following a challenge by Tasmanian Breweries Pty Ltd. It was announced that the Federal Government proposed to carry out an \$18 million survey of the Continental shelf and slope to assess the potential resources of off-shore Australia. Queen Elizabeth II, Duke of Edinburgh, Prince Charles and Princess Anne commenced their Royal Visit.

*April.* The Prime Minister announced the setting up of a Joint Committee to investigate the problem of the Crown of Thorns starfish. The *Continental Shelf (Living Natural Resources) Act* 1968 came into effect, implementing Australian sovereignty over the living resources of the Continental Shelf. Cape Everard, Victoria, renamed Point Hicks, after Lieutenant Hicks who sailed with Captain Cook.

*May.* The Prime Minister announced the appointees and terms of reference for the Royal Commission to investigate oil drilling in the Barrier Reef region. Vietnam Moratorium Day held on 8 May—thousands of people marched in all State capitals as a protest against Australia's participation in the Vietnam war. The Canadian Prime Minister, Mr Trudeau, made a visit to Australia. Employers, trade unions and the Commonwealth Government agreed on new industrial dispute procedures in the Commonwealth industrial sphere. It was announced that the Bureau of Transport Economics would be established in the Department of Shipping and Transport and that its function would be to analyse the costs and economics of transport in Australia. State elections held in South Australia; the Labor Party came into office with a majority of 7 and Mr Dunstan was sworn in as Premier. In the Victorian State elections the Liberal Party under Sir Henry Bolte was returned to office.

*June.* The Senate Select Committee Water Pollution report was tabled in the Senate. The Commonwealth Parliament approved the setting up of 7 standing committees and 5 estimates committees in the Senate. The *Australian Industry Development Corporation Act* 1970 assented to. The Senate rejected the Receipts Tax Bill which would have empowered the Commonwealth to collect the tax for State Governments. The *Marginal Dairy Farmers Agreement Act* 1970 came into effect. The Snowy Mountains Engineering Corporation was established, replacing the Snowy Mountains Authority.

*July.* The new health insurance scheme, based on the 'common fee' concept, came into operation. The Prime Minister opened the Tullamarine International Airport (cost \$50 million) near Melbourne. The Metric Conversion Board appointed to begin planning for Australia's conversion to the metric system of weights and measures; the conversion is expected to take up to ten years. The prime Minister made a six day tour of Papua New Guinea; he announced that as a step towards self-government for the Territory certain administrative functions were transferred from the Commonwealth Government to the Papua New Guinea House of Assembly. Canberra nurses returned to work after a one month strike. The Senate Select Committee on Securities and Exchange held its first public hearing. Assent was given to two land lease ordinances granting the Aborigines exclusive land leasing rights for specified purposes over the 93,000 square miles of Aboriginal reserves in the Northern Territory; The Government announced that it would review the Australian immigration programme, including future population levels and the benefits and costs of immigration. Coal miners in three states were awarded a 35 hour working week which is to be phased in over a twelve month period.

*August.* Week-end gaol sentences for young offenders came into operation in Queensland. The Arbitration Court ruled that the A.C.T.U. could use profitability as an issue in the oil industry wage case. A Sydney woman gave \$6 million to establish a medical education and research fund. It was announced that the Australian Road Safety Council was to be replaced by two road safety bodies: one to undertake research, the other to co-ordinate national road safety publicity. The names of members of the Australian Film Development Corporation announced. Details announced of an employment training scheme to assist women to enter

the workforce. The A.C.T.U. called for Australia wide stop-work meetings which were held because of dissatisfaction over the Federal Budget.

*September.* Arrival of the first five of the 24 Phantom F4E bomber aircraft, leased from the United States pending a decision on the purchase of F111's. New film censorship procedures agreed to by Federal and State ministers. Royal Commission appointed in South Australia to inquire into the moratorium march in that state.

*October.* Sixteenth Commonwealth Parliamentary Conference held in Canberra. First Boeing 747 (Jumbo) aeroplane to arrive in Australia landed at Sydney. Building workers in New South Wales strike for increased wages. A statutory wool marketing authority, the Australian Wool Commission, was established. Westgate Bridge disaster occurred in Melbourne—33 workers died. All P.M.G. workers were granted a five day working week. It was decided that the Port Phillip Bay oil line would be laid overland following a strong campaign against pollution danger by residents and conservationists. A plan to develop the Port of Darwin (cost \$19 million) was announced. The Prime Minister announced that a naval base costing \$38 million would be built at Cockburn Sound in Western Australia.

*November.* The *La Balsa* raft with a crew of 4 men reached Australia from Ecuador. The Queensland Government rejected an application to mine a sand mass at Cooloola; instead the area is to become a national park and forest reserve. Qantas, Australia's international airline, celebrated fifty years of operation. The flexible reserve wool price scheme came into operation. The A.C.T.U. announced that it would enter retail trading in Melbourne from January in partnership with a discount house. Senate elections held, the party representation being as follows: Liberal Party—10; Australian Labor Party—14; Democratic Labor Party—2; Country Party—2; Independent—2. The Pope arrived in Australia for a three day visit.

*December.* Three new Asian aid programmes (\$35 million) approved. Voting age reduced to 18 years in Western Australia. The Federal Government set up a committee to investigate conditions for Aborigines on Northern Territory cattle stations. Prospecting rights awarded to three groups of Aborigines over 1,400 square miles of Arnhem Land reserve. The Minister for the Interior announced that the Commonwealth would buy all freehold land (90,000 acres) within the Australian Capital Territory. A three year \$20 million defence aid grant to Malaysia and Singapore was announced. The Commonwealth Conciliation and Arbitration Commission increased total award wages by 6 per cent and the minimum wage for adult males by \$4.00 a week from the beginning of the first pay period on or after 1 January 1971 (see pages 260–5). Assent given to an ordinance that prevented overseas takeovers of mining companies (for details see page 1057). The *Environment Protection Act 1970* (Victoria) assented to; provided for the establishment of an environment protection authority.

1971 *January.* Compulsory wearing of seat belts, where fitted, introduced in Victoria. The Commonwealth and States agreed on details of the rural reconstruction scheme for which the Commonwealth was to provide \$100 million to the States over a four year period. Victorian Aborigines (to June) were to be granted ownership of reserves at Lake Tyers and Framlingham, Victoria.

*February.* Sir John McEwen, former Prime Minister, Leader of the Australian Country Party and Deputy Prime Minister, retired from Federal Parliament. The Prime Minister announced measures including reduction in Commonwealth expenditure, to control inflation. Trade union ban on the export of merino rams broken by a charter aeroplane using R.A.A.F. refuelling and loading facilities. The Minister for Foreign Affairs announced that Australia would sign the United Nations treaty banning the use of nuclear weapons under the sea. The Governor-General made an official visit to New Zealand. At the New South Wales State elections the Liberal Party under the Hon. R. W. Askin was returned to office. Announced that Australia would donate eleven DC3 aircraft to Cambodia, Laos and Nepal as part of a foreign aid programme. State elections held in Western Australia and the Labor Party returned for first time in twelve years. The *Amanda Miller*, the largest ship built in Australia was launched; the ship had been rebuilt following partial destruction by fire in April 1970. The Australian National Line announced that it would operate an Australian owned ship of the Pacific-Australia Direct Line (P.A.D.) to trade between Australia and the western coast of the United States and Canada. The population of Western Australia reached one million.

*March.* Report made by Colonel Sir Eric St. Johnston on the Victorian Police Force tabled in the Victorian Parliament. Torrential rains broke a severe drought in south-western Queensland and north-eastern South Australia. The Prime Minister (Mr J. G. Gorton) resigned; Mr William McMahon was elected as leader of the Liberal Party and was sworn in as Prime Minister. Dame Annabelle Rankin appointed High Commissioner to New Zealand to become Australia's first top-level woman diplomat. A large company agreed to supply the A.C.T.U. discount house without any restrictions on retail selling prices. The Prime Minister

(Mr McMahon) announced his new ministry and his intention to appoint assistant ministers. The Duke of Edinburgh arrived in Australia to begin a ten day visit. Australian National University commenced installation of a unique tandem accelerator with a guaranteed terminal voltage of fourteen million volts. A report tabled in Commonwealth Parliament showed that the Crown of Thorns starfish did not constitute a threat to the Great Barrier Reef area; the Prime Minister then announced that a three year research programme into this problem would be undertaken. The Prime Minister announced that the Australian forces in Vietnam would be reduced by 1,000 men.

*April.* The Royal Australian Air Force celebrated its fiftieth jubilee; the celebrations were attended by the Duke of Edinburgh. South Australia lowered the age of adulthood to eighteen years. Australia's table-tennis team visited mainland China. An employment scheme giving vocational training to workers displaced by technological change was announced; it will operate from 1 July 1971 and offer training for a maximum period of twelve months. The King and Queen of Nepal made a seven day visit to Australia. It was announced that the Commonwealth Government would prepare a programme for the movement of Papua-New Guinea to full internal self-government in the period 1972-76. The Yirrkala Aborigines legal challenge for land rights at Gove, a bauxite mining project in the Northern Territory, was dismissed. Australia signed a new five power defence agreement in London. Strike by ship stewards tied up 120 vessels in Australian ports.

*May.* Building industry tradesmen struck for increased margins and full pay rates for injured workers on compensation. Cigarette advertisements to be banned from radio and commercial television during children's peak viewing times. It was announced that the migrant intake target for the next financial year would be reduced to 140,000 new settlers. The Senate Select Committees on Health and Welfare and on Drug Trafficking and Drug Abuse tabled their reports to the Senate. The Prime Minister announced membership and terms of reference of a ministerial committee on aboriginal advancement, principally in the Northern Territory. *Public Order (Protection of Persons and Property) Act 1971* assented to. The High Court ruled that Victoria must pay payroll tax to the Commonwealth as it does not breach the Constitution. Two newspaper editors called before the Senate for breach of privilege in publishing the contents of a draft report before its presentation to the Senate. Seabed agreement between Indonesia and Australia signed in Canberra. Mr Neville Bonner, selected to fill a Queensland Senate vacancy, the first Aboriginal member of any Australian parliament. Qantas airlines paid \$½ million to a bomb hoaxter. The new Commonwealth Department of the Environment, Aborigines and the Arts created.

*June.* Australia joined the Organisation for Economic Co-operation and Development. Inquiry into the West Gate bridge disaster completed after eighty sitting days. Domestic airlines began to use Tullamarine airport in Melbourne. Work started on the Melbourne underground railway. The Victorian Trades Hall Council lifted its ten month ban on construction of an ethane gas pipeline across Port Phillip Bay when it was shown that the pipeline would probably improve rather than destroy the ecology. The Springbok rugby team started their Australian tour; anti-apartheid demonstrations took place in all centres where matches were played. An Australian Labour Party delegation of five left for a visit to mainland China. It was announced that a new railway would be built to link Adelaide to the east-west standard gauge railway. Vietnam Moratorium marches held in all capital cities. The 1971 Census of Population and Housing was held. Independent inquiry (Kerr Committee) recommended interim pay increases for servicemen until a full work-value inquiry can be completed.





## DIARY OF PRINCIPAL ECONOMIC EVENTS, 1970-71

The principal economic events in earlier years were shown in the following issues:

Years	Year Book No.	Pages
1931 to 1938	33	968-77
1939 to 1944	36	1129-41
1945 to 1948	37	1235-45
1949 to 1951	39	1331-40
1952 to 1955	42	1149-60
1956 to 1958	46	1185-92
1958-59 to 1961-62	48	1188-1200
1962-63	49	1253-56
1963-64	50	1283-88
1964-65	51	1269-74
1965-66	52	1185-88
1966-67	53	1279-82
1967-68	54	1253-57
1968-69	55	1243-48
1969-70	56	1077-81

In 1970-71 a generally high level of activity was maintained in the Australian economy but the rate of growth was lower than in the past two years. Unemployment remained moderate although rising during the course of the year. Net population gain from overseas migration was less than the high gains of the previous two years. Demand was under some restraint as a result of increases in interest rates in the first half of 1970, but the rate of increase in prices and wages accelerated, and inflation became a matter of growing concern. The wool industry suffered severe losses when wool prices fell further and substantially in the first four months of the financial year and then remained at a low level. The fall in returns from wool together with reduced production of wheat depressed other business activity in rural areas. Mining output again grew strongly but some metal prices declined during the year.

The overall production performance of the economy is summarised in the growth in gross national product measured in constant prices. This rose by 3.9 per cent in 1970-71 compared with an increase of 5.6 per cent in 1969-70. Gross non-farm product at constant prices increased by 4.4 per cent in 1970-71 compared with increases of 6.9 per cent in 1969-70 and 5.9 per cent in 1968-69. Gross farm product at constant prices fell slightly in 1970-71. At current prices, gross national product rose by 9.7 per cent in 1970-71, gross non-farm product rose by 11.4 per cent and gross farm product fell by 12.0 per cent.

A lower rate of growth in demand in 1970-71 was, in the main, due to the lower rate of growth in personal consumption expenditure and exports. Personal consumption expenditure on goods and services at current prices increased by 8.9 per cent (2.7 per cent at constant prices) in 1970-71 compared with 9.1 per cent (5.2 per cent at constant prices) in 1969-70. Exports of goods and services at current prices increased by 6.6 per cent (8.4 per cent at constant prices) in 1970-71 compared with the exceptional increase of 21.9 per cent (18.8 per cent at constant prices) in 1969-70. In terms of the constant price estimates, there was a fall of 2.4 per cent in private capital expenditure on dwellings and a marginal fall in public capital expenditure. However there was stronger growth in other private capital expenditure which at constant prices, rose 8.0 per cent in 1970-71 compared with an increase of 4.1 per cent in 1969-70. Net current expenditure on goods and services by public authorities also grew more strongly in 1970-71 than in the previous year.

The growth in wages, salaries and supplements again accelerated in 1970-71 while the gross operating surplus of trading enterprises again grew at a slower rate. Because of the decline in farm income, the gross operating surplus of unincorporated enterprises fell in 1970-71 after negligible growth in 1969-70. There was a smaller rate of increase in the gross operating surplus of companies in the latest year, and the gross operating surplus of public enterprises showed no growth. Wages, salaries and supplements increased by 15 per cent in 1970-71 compared with an increase of 12 per cent in 1969-70 although the growth in average employment fell slightly. Average earnings increased by 11 per cent, the most rapid increase since the early nineteen-fifties. Substantial increases in earnings were obtained by some groups during the course of 1970 and in December 1970 the decision was announced in the National Wage Case to raise award 'total wages' by 6 per cent.

The balance of payments on current account in 1970-71 resulted in a deficit of \$777 million compared with a deficit of \$746 million in 1969-70. There was a balance of trade surplus of \$446 million in 1970-71, a small increase on the surplus of \$410 million in the previous year. Exports f.o.b. rose 7 per cent to \$4,221 million. Exports of wool and sheepskins declined sharply from \$824 million in 1969-70 to \$593 million in 1970-71 and there were smaller falls in the value of exports of iron and steel, which decreased from \$136 million to \$97 million, and the non-ferrous metals, copper, lead, zinc and their base alloys, which decreased from \$237 million to \$191 million. These falls were more than offset by increases in most other principal categories of merchandise exports. Exports of wheat and flour rose sharply from \$359 million to \$454 million and exports of sugar rose from \$116 million to \$150 million. Iron ores and concentrates continued the strong growth of the previous year, rising from \$278 million to \$374 million. Exports of machinery and transport equipment also showed a substantial increase from \$280 million to \$326 million. The value of imports f.o.b. increased by 6 per cent to \$3,775 million. Most principal categories of merchandise imports rose in value. In particular, imports of chemicals rose from \$366 million in 1969-70 to \$410 million in 1970-71, imports of iron and steel increased from \$95 million to \$139 million, and imports of machinery also showed a substantial rise from \$960 million to \$1,071 million. Among the falls, the value of petroleum and petroleum products declined sharply from \$254 million in 1969-70 to \$189 million in 1970-71. The improvement of \$36 million in the balance of trade surplus was more than offset by an increase of \$67 million in the deficit on other current account transactions. Payments (net of receipts) in respect of travel, transportation and other services rose by \$29 million in 1970-71; there was an increase of \$13 million in net property income payable overseas; and net transfer payments, private and government, rose by \$25 million.

The deficit of \$777 million on current account was more than offset by a net apparent capital inflow of \$1,380 million resulting in a favourable net monetary movement for the year of \$602 million.

Early in 1970 there was extensive flooding in eastern Australia and by March the long standing drought in Western Queensland and adjacent parts of South Australia and New South Wales had been broken.

Farm income fell by about one quarter in 1970-71 increasing the burden of existing debts of the farm sector while asset values declined. The fall in wool prices was arrested in November 1970 when the newly established Australian Wool Commission began buying, but in the first half of 1971 wool prices were about 30 per cent below the level of June 1969, and not much above the lowest level since the Second World War. Wheat production quotas for 1970-71 were lower than in 1969-70 but were increased slightly for 1971-72. Gross farm product in 1970-71 represented only 6 per cent of gross national product compared with 11 per cent ten years earlier. However farm production continued to be of major importance to export earnings. Exports of goods of farm origin, including processed products, represented 50 per cent of exports in 1970-71 compared with 78 per cent ten years earlier. At the end of 1970-71 consideration continued to be given to further forms of assistance to the wool industry. The Commonwealth and States agreed on a rural reconstruction scheme for which the Commonwealth would provide \$100 million to the States over four years for debt reconstruction and farm amalgamation. In June, wool-growers proposed a guaranteed average price of 40 cents per pound for greasy wool. (A guaranteed average price of 36 cents and other measures were later provided for in the Commonwealth Budget in August 1971.)

Expansion of the mining industry continued to provide a strong impetus to capital expenditure. Mineral discoveries were again the focus of world attention, in particular discoveries of large uranium deposits. (The richest reported find was later substantially downgraded, but was even then significant.) Commercial oil production from Bass Strait had commenced in the previous year and the large Kingfish oilfield came into production in April 1971. During 1970-71, of the inputs of crude oil to domestic refineries 51 per cent was indigenous crude. Production of nickel concentrate approximately doubled in 1970-71. It was announced that subject to proving reserves, Sydney would draw natural gas supplies from South Australia.

In the finance markets, non-bank financial institutions continued to increase in relative importance, and recently established merchant banks mainly owned by Australian and overseas financial institutions took a larger role in providing finance. Financial conditions were fairly tight in 1970-71. There were small further increases in interest rates paid by private borrowers for long term funds. Share prices fell. On a monthly average basis, the Sydney all ordinaries share price index fell 10 per cent and the Sydney non-ferrous metals index fell 29 per cent from June 1970 to June 1971. The prices of speculative mining stocks declined sharply and the number of new mining company flotations was greatly reduced. Investor confidence was affected by a series of share market disturbances, including reversals of news of drilling results and the failure of several stock broking firms. The announcement in February by a large mining investment company that it was unable to meet its debts had repercussions in short-term financial markets.

Events in financial markets in 1970-71 and recent years led to modification of stock exchange rules and official investigations into the securities market. The Senate Select Committee on Securities and Exchange held its first public hearing in July 1970.

In Commonwealth-State relations, the Commonwealth did not proceed with plans to collect a receipts tax for the States, and instead arranged to compensate the States by additional grants. In recognition of budgetary difficulties faced by the States as a result of abnormally large increases in wage costs, the Commonwealth agreed to provide \$43 million to reduce their current deficits. Victoria challenged the power of the Commonwealth to levy pay-roll tax on State Government payrolls, but the power of the Commonwealth was upheld by the High Court. Arrangements were made for the States to take over the pay-roll tax from the Commonwealth, and the States announced they would increase pay-roll tax from  $2\frac{1}{2}$  to  $3\frac{1}{2}$  per cent.

Restrictive trade practices were seen as an important issue in the face of the rate of increase in wages and prices. Charges against concrete pipe manufacturers under the Trade Practices Act were dismissed, and the Commonwealth appealed to the High Court. Proceedings were instituted in the Trade Practices Tribunal against agreements made by frozen vegetable processors and an agreement made by pharmaceutical wholesalers. The Australian Council of Trade Unions confronted certain suppliers who subsequently agreed to supply the ACTU store without restriction on selling price. Legislation dealing with resale price maintenance received the Royal Assent in May 1971 and came into operation in August.

#### 1970-71

- 1 July. The new health insurance scheme, based on the 'common fee' concept, came into operation. Special cash loan of \$20 million, financed from a Commonwealth trust fund, issued to redeem a London maturity. The full amount was subscribed to the 7 per cent May 1989 security.
- 4 July. The Metric Conversion Board appointed to begin planning Australia's conversion to the metric system of weights and measures which is expected to take up to 10 years.
- 15 July. The Senate Select Committee on Securities and Exchange commenced holding public hearings.
- 30 July. Coal-miners in New South Wales, Tasmania and Queensland were awarded a 35 hour working week which is to be phased in over a 12 month period.
- 1 August. Australian National Line raised freight rates from Tasmania by  $12\frac{1}{2}$  per cent. Domestic air fares raised 6 per cent; this was followed by a 6 per cent increase in air freight rates.
- 5 August. Issue price of Commonwealth Treasury Notes was reduced to 98.61 per cent for 3 month notes to yield 5.654 per cent per annum to maturity, and to 97.19 per cent for 6 month notes to yield 5.798 per cent per annum to maturity.
- 11 August. Commonwealth cash loan opened with yields of 6.50 per cent for 2 years 11 months, 6.80 per cent for 8 years and 7 per cent for 18 years 9 months. An amount of \$71 million was raised. A conversion offer was made on the same terms as the cash loan for \$244 million maturing 15 August. An amount of \$176 million was converted.
- 17 August. Defence Minister announced pay increases ranging up to \$8 per week for about 6,000 Navy personnel; the previous day 200 sailors had stopped work.
- 18 August. Commonwealth Budget for 1970-71 introduced into the House of Representatives. The Budget provided for estimated expenditure of \$7,882.7 million and estimated receipts of \$7,887.1 million in the year 1970-71. (Details of the 1971-72 Budget as well as the actual budget results for 1970-71 are shown in the Appendix, see page 1068.) In 1969-70 receipts of the Commonwealth were \$7,081.1 million, and expenditure amounted to \$7,087.9 million. The main items of revenue (1968-69 figures shown in parentheses) were: income taxes \$4,055.5 million (\$3,418.8 million); excise duties \$939.7 million (\$901.0 million); sales tax \$567.4 million (\$494.1 million); customs duties \$414.5 million (\$347.7 million); and pay-roll tax \$230.5 million (\$205.6 million). The main items of expenditure were: payments to or for the States \$1,658.6 million (\$1,457.2 million); defence services \$1,103.1 million (\$1,164.7 million); social and health services \$1,341.8 million (\$1,162.4 million); State works and housing programmes \$758.0 million (\$710.0 million); advances for capital purposes \$365.5 million (\$323.8 million); and repatriation services \$296.7 million (\$284.4 million).
- 1 September. Drought Bonds, Series 2, issued at par with interest rate of 4 per cent for 10 years. Significant uranium strike east of Darwin (Nabarlek). Shipping freight rates for wool exported to Europe and Britain increased by 4 per cent.



- 1970-71 Tasmanian Budget introduced, providing for a deficit of \$2,996,000 before receipt of the completion payment of the special grant. It was estimated that revenue would be \$132,670,000 and expenditure \$135,666,235. In 1969-70 revenue amounted to \$123,819,000 and expenditure to \$121,004,000, resulting in a surplus of \$2,815,000.
- 3 *September*. 1970-71 South Australian Budget introduced, providing for a deficit of \$4,896,000; it was estimated that revenue would be \$371,864,000 and expenditure \$376,760,000. In 1969-70 revenue amounted to \$338,498,000 and expenditure to \$335,578,000 leaving a surplus of \$2,920,000.
- 7 *September*. Domestic airlines announced fare and freight increases of 3 per cent.
- 15 *September*. Southbound shipping freight rates between Britain, Europe and Australia increased by 12.5 per cent.
- 17 *September*. The 1970-71 New South Wales Budget introduced, providing for an overall deficit of \$8,067,000 after allowing for the net results of business undertakings; it was estimated that receipts and expenditure excluding business undertakings, would be \$875,726,000 and \$882,572,000 respectively. In 1969-70 revenue was \$773,609,000 and expenditure \$776,821,000 leaving a deficit (excluding business undertakings) of \$3,211,000 and an overall deficit of \$4,402,000.
- 24 *September*. Queensland Budget for 1970-71, introduced, providing for a deficit of \$2,487,000 with estimated revenue and expenditure at \$486,958,000 and \$489,445,000 respectively. In 1969-70 revenue amounted to \$441,074,000 and expenditure to \$444,618,000 leaving a deficit of \$3,544,000. Western Australian Budget for 1970-71 introduced, it was estimated that both revenue and expenditure would be \$359,886,000. In 1969-70 revenue amounted to \$318,189,000 and expenditure to \$318,901,000 leaving a deficit of \$712,000.
- 29 *September*. Victorian Budget for 1970-71 introduced providing for total receipts and expenditure from consolidated fund (combining consolidated revenue and loan funds) of \$982,588,000. Revenues for financing loan programmes were estimated at \$179,740,000 (including Commonwealth capital grant payment of \$51,020,000) and loan expenditures were estimated to total \$171,636,000.
- Victorian Government announced that it would no longer pay Commonwealth pay-roll tax. Reserve Bank announced that it would release \$63 million for loans to farmers and industry, \$31 million to go to banks' term loan funds, \$32 million to farm development loan funds.
- 1 *October*. A conversion offer of Special Bonds Series 'U' was made for \$51 million Special Bonds Series 'T' maturing 1 October. An amount of \$32 million was converted.
- Australia and New Zealand Bank and the English, Scottish and Australian Bank complete their merger.
- A pay rise of 20 per cent for members of Tasmanian parliament came into effect.
- 4 *October*. A contract announced between one Australian and two Japanese companies for the sale of nearly 7 million tons of wood chips from Northern Tasmania over approximately eleven years.
- 8 *October*. Commonwealth Government announced that it would compensate the states this year for their loss of receipts tax following the Senate's disallowance of the States Receipts Tax Act in September.
- 15 *October*. A span of the Westgate Bridge, under construction over the River Yarra in Melbourne collapsed and thirty-three workers were killed.
- 21 *October*. All P.M.G. staff were granted a 5 day working week.
- 26 *October*. A 9 per cent wage increase was granted to 8,000 Victorian Electricity Commission workers.
- 27 *October*. It was announced that all bounties on nitrogenous fertilisers would be removed from 18 November 1970.
- 30 *October*. A large uranium deposit discovered at Mudginbarry Station, Northern Territory.
- 4 *November*. The Western Mining Corporation announced that it would build a \$30 million nickel smelter at Kalgoorlie, Western Australia, as part of a \$75 million two year expansion programme.
- 5 *November*. Special Bonds, Series 'V', issued at par with interest rates ranging from 6.40 to 7 per cent and optional redemption prices ranging from par to 103 per cent at maturity on 1 October 1978.
- The members of the Australian Wool Commission appointed (for further details, *see* page 802).
- 8 *November*. Pay rises announced for up to 5,000 members of the armed services.



- 11 *November*. Commonwealth cash loan opened with yields of 6.40 per cent for 1 year 6 months, 6.60 per cent for 4 years 6 months, 6.80 per cent for 8 years 9 months and 7.0 per cent for 18 years 6 months. An amount of \$118 million was raised. A conversion offer was made on the same terms for \$289 million maturing 15 November. An amount of \$224 million was converted.
- 16 *November*. First day of operation of flexible reserve wool price scheme; the Australian Wool Commission purchased wool at auction.
- 18 *November*. The A.C.T.U. announced it would enter retail trading in Melbourne in January in partnership with a discount house.  
An agreement was signed between the Western Australian Government and B.H.P./Alwest for the establishment of a \$200 million bauxite-aluminium project.
- 29 *November*. A Tasmanian company signed a 15 year \$121.5 million contract with a Japanese company for supply of 9 million tons of wood chips.
- 1 *December*. New South Wales teachers were granted salary increases of 14 per cent.
- 4 *December*. A \$25 million meat export contract signed with Russia.
- 7 *December*. Queensland Government announced it would provide a guarantee for the \$40 million Metals Exploration N.L. debentures issue.
- 8 *December*. Third Division Commonwealth Public Servants offered a 9.5 to 12.76 per cent pay rise which was accepted.
- 14 *December*. The Commonwealth Conciliation and Arbitration Commission increased total award wages by 6 per cent and the minimum wage for adult males by \$4.00 a week from the beginning of the first pay period on or after 1 January 1971 (see pages 260-5).  
The *A.C.T. Companies (Uranium Mining Companies) Ordinance 1970* assented to; it restricts the number and value of foreign shares that may be held in specified companies and requires the disclosure of substantial holdings in these companies.
- 18 *December*. Charges brought by the Commonwealth against three concrete pipe manufacturers under the Trade Practices Act were dismissed by the Industrial Court. The Commonwealth appealed to the High Court.

## 1971

- 4 *January*. Equitable rights of shareholders in listed public companies were reinforced and controls over directors tightened in new listing requirements introduced by Australian Associated Stock Exchanges.
- 8 *January*. Victorian teachers received pay rises of 20 per cent for professional officers and 15 per cent for teachers.
- 11 *January*. Minister for Defence announced pay rises for all members of the regular and citizen forces.
- 18 *January*. Trans-Tasman shipping freight rates increased by an average of 10 per cent for roll-on roll-off ships and 12½ per cent for conventional ships.
- 20 *January*. Largest quarterly consumer price index increase since 1956: 1.9 per cent for the December quarter.
- 29 *January*. A Commonwealth private loan of 60 million Dutch guilders (\$15 million) placed in Europe, issued at par with interest at 7.75 per cent for a period of 5 years.
- 1 *February*. Shipping freight rates from Australia to Asian ports, with the exception of Japan, increased by approximately 20 per cent.
- 3 *February*. The Prime Minister announced that action was being taken to control inflation as follows: (i) Commonwealth Government expenditure would be reduced (later announced as a reduction of \$75.5 million for the remainder of the financial year); (ii) suspension of the special taxation deduction of 20 per cent of the cost of capital expenditure on new plant and equipment used in manufacturing to encourage the postponement of private investment in plant etc., and (iii) that interest rates on the new Commonwealth loans would not increase, nor would direct or indirect taxation.
- 5 *February*. Crash of Mineral Securities (Aust.) Ltd, (Min Sec), a mining investment group; the group had made a loss instead of a profit as previously announced; a statement made to the Stock Exchange.
- 8 *February*. Following extensive flooding in parts of eastern Australia, the Commonwealth announced that it would offer the usual Commonwealth-State dollar for dollar assistance for flooded areas.

- 9 *February*. Vam Ltd, a Sydney mining house, announced that it would apply to the Supreme Court for the appointment of a provisional liquidator.
- 11 *February*. Commonwealth cash loan opened with yields of 6.50 per cent for 1 year 9 months, 6.80 per cent for 8 years 6 months and 7 per cent for 15 and 30 years. An amount of \$127 million was raised. A conversion offer was made on the same terms as the cash loan for \$293 million maturing 15 February. An amount of \$53 million was converted.
- 12 *February*. The Prime Minister issued an ultimatum to the Australian Medical Association over the proposed increase of 15 per cent in doctors' fees.
- 15 *February*. Special cash loan of \$75 million, financed from a Commonwealth trust fund, issued to redeem an internal maturing loan. Terms were the same as those for the cash loan which opened 11 February.  
Announced that the Commonwealth Public Service had stopped recruiting school leavers as a part of the Government's economy drive.
- 18 *February*. It was announced that the Min Sec collapse would be investigated by the Senate Select Committee on Securities and Exchange.
- 22 *February*. It was announced that the 1971-72 wheat quota would be increased to 339 million bushels.
- 25 *February*. The Australian National Line announced that it would operate an Australian owned ship of the Pacific Australia Direct Line (P.A.D.) to trade between Australia and the Western Coast of the United States and Canada.
- 1 *March*. An official liquidator appointed for Mineral Securities (Aust.) Ltd, (Min Sec).
- 2 *March*. Liner cargo shipping freight rates from Britain and Europe to Australia increased by 12 per cent.
- 10 *March*. Mr Gorton resigned as Prime Minister; Mr McMahon was elected leader of the Liberal Party and sworn in as Prime Minister.
- 12 *March*. South Australia to supply New South Wales with natural gas—details of agreement made known.
- 15 *March*. Mr McMahon announced that social service and repatriation pensions would increase by 50c a week as from 1 April 1971.
- 17 *March*. It was announced that discussion had taken place concerning an agreement for the avoidance of double taxation between Australia and France.
- 18 *March*. Following the threat of strike action, a large company agreed to supply the A.C.T.U. discount store without any restrictions on retail selling prices.
- 20 *March*. Announced that the Senate Select Committee on Securities and Exchange would investigate 'short-selling' on the Sydney stock exchange.
- 24 *March*. The Senate Select Committee on Securities and Exchange announced that it would investigate Leopold Minerals following its suspension from the stock exchange pending clarification of the company's procedures in assaying nickel ore.
- 31 *March*. The Commonwealth issued \$190 million Treasury Notes to the Reserve Bank and advanced the proceeds to the Australian Wheat Board to enable the Board to repay an equivalent amount to the Reserve Bank in connection with advances from the Bank to finance the 1969-70 Wheat Pool.
- 1 *April*. Shipping cargo rates from some Eastern ports to Australia rose by 15 per cent (*see* 1 February 1971).
- 2 *April*. Wool price of 52.2c per kilogram or 23.64c per lb reached the lowest since 1946-47 sales (the 1946-47 price was 45c per kilogram or 20.41c per lb).
- 5 *April*. A meeting of the Australian Loan Council was held in Canberra.
- 6 *April*. Stock brokers informed by Sydney Stock Exchange that 'short-selling' was to be banned on the Exchange.
- 8 *April*. Certain fourth division Commonwealth employees (key-board grade staff) were granted an 8.75 per cent pay rise.
- 14 *April*. Reserve Bank announced that it would release \$35 million from Statutory Reserve Deposits.
- 15 *April*. The Kingfish oilfield in Bass Strait, the largest in Australia came into production.
- 19 *April*. Ship stewards' strike tied up 120 ships in Australian ports.

- 20 April. Wages increases of between \$3.00 and \$5.50 per week were awarded to 10,000 workers employed in the metal trades industry.
- 23 April. The Japanese Minister for International Trade and Industry arrived in Australia, accompanied by a trade delegation.  
Issue price of Commonwealth Treasury Notes was increased to 98.65 per cent for three-month notes to yield 5.489 to maturity and 97.26 per cent for six-month notes to yield 5.650 per cent to maturity.
- 28 April. The Minister for Trade announced that the reviews of tariffs to be carried out by the Tariff Board would begin with tariffs on machinery and manufactures of metal.
- 1 May. Liner cargo shipping rates to and from Japan rose by 12½ per cent.
- 4 May. The Minister for Immigration announced that the migrant intake for 1971–72 would be cut back to 140,000.
- 7 May. Federal Government approved an increase in doctors' fees, to operate from 1 July 1971.
- 8 May. One million tons of wheat sold to the United Arab Republic in addition to the 1½ million tons sold previously.  
Wood-chip mill opened at Eden on the New South Wales south-coast.
- 13 May. Commonwealth cash loan opened with yields of 6.44 per cent for 3 years, 6.60 per cent for 4 years 11 months, 6.80 per cent for 9 years 6 months and 7 per cent for 18 years and 29 years 9 months. An amount of \$197 million was raised. A conversion offer was made on the same terms as the cash loan for \$152 million maturing 15 May. An amount of \$139 million was converted.
- 14 May. The High Court ruled that Victoria must pay pay-roll tax to the Commonwealth as this requirement does not breach the Constitution.
- 18 May. Pay rises granted to 16,000 Queensland public servants ranging from 7 per cent to 11.4 per cent, to date from 5 July 1971.
- 28 May. B.H.P. announced an 8 per cent increase in steel prices.
- 1 June. Postal officers were granted a 9.5 per cent increase in salaries which was made retrospective to December 1970.  
A conversion offer of Special Bonds Series 'V' was made for \$15 million Special Bonds Series 'J' maturing 1 June. An amount of \$10 million was converted.
- 3 June. Rich uranium strike at Jim Jim Creek, Northern Territory.
- 11 June. Report made by the Kerr Committee on pay and conditions for servicemen released. It made an interim recommendation of a new pay system until a full work-value inquiry can be carried out.  
Issue price of Commonwealth Treasury Notes was increased to 98.68 per cent for three month notes to yield 5.365 per cent to maturity and 97.30 for six month notes to yield 5.565 per cent to maturity.
- 13 June. Government approved an increase in Australian National Line interstate freight charges.
- 15 June. A \$145 million smogless tandem-turbine power station to be built in Victoria—to operate on natural gas from mid 1976.
- 16 June. Premiers' Conference and Australian Loan Council meeting. Agreed at the Premiers' Conference that the States instead of the Commonwealth would receive pay-roll tax (*see* Appendix); Commonwealth agreed to assist the States to meet prospective deficiencies by providing total additional revenue assistance of \$62.7 million in 1971–72.  
The Australian Loan Council met and approved a borrowing programme for 1971–72 of \$860 million. The Commonwealth to provide an interest-free capital grant of \$210 million towards this programme which should reduce the need for Commonwealth assistance by way of special loans and result in lower State Government debt charges than would otherwise have been the case. A borrowing programme of \$428 million was approved for State, semi-government and local authorities which borrow more than \$300,000 during the year.
- 24 June. Agreement reached on the terms of United Kingdom's entry into the European Economic Community.
- 25 June. Pay increases ranging from \$1.50 to \$5.00 a week granted to workers in the vehicle building industry.
- 30 June. Special cash loan of \$200 million, financed from a Commonwealth trust fund, issued to complete loan programmes for 1970–71. Terms were the same as those for the cash loans which opened 13 May.





## APPENDIX

Some recent information which has come to hand since the various chapters were sent to press is given in summarised form in the following pages, but for later statistics on the subjects dealt with in chapters reference should in general be made to other publications issued by this Bureau, e.g. the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, the *Digest of Current Economic Statistics*, and the various mimeographed statements issued on particular subjects.

### CHAPTER 3. GENERAL GOVERNMENT

#### Parliamentary government

Party affiliation is indicated by the use of the following abbreviations.

A.D.L.P.—Australian Democratic Labor Party

A.L.P.—Australian Labor Party

C.P.—Australian Country Party

Ind.—Independent

Lib.—Liberal Party of Australia

#### Commonwealth Ministries

##### THE McMAHON MINISTRY—OCTOBER 1971

(The State in which each Minister's electorate is situated and party affiliation are shown in parenthesis. Party affiliation is indicated by the use of the following abbreviations: C.P.—Australian Country Party, Lib.—Liberal Party of Australia.)

##### \*Prime Minister—

THE RT HON. W. McMAHON, M.P. (N.S.W.)  
(Lib.)

##### \*Deputy Prime Minister and Minister for Trade and Industry—

THE RT HON. J. D. ANTHONY, M.P. (N.S.W.)  
(C.P.)

##### \*Treasurer—

THE HON. B. M. SNEDDEN, Q.C., M.P. (Vic.)  
(Lib.)

##### \*Minister for Primary Industry—

THE HON. I. SINCLAIR, M.P. (N.S.W.) (C.P.)

##### \*Minister for Health and Leader of the Government in the Senate—

SENATOR THE HON. SIR KENNETH ANDERSON  
(N.S.W.) (Lib.)

##### \*Minister for National Development and Leader of the House—

THE HON. R. W. C. SWARTZ, M.B.E., E.D.,  
M.P. (Qld) (Lib.)

##### \*Minister for Foreign Affairs—

THE HON. N. H. BOWEN, Q.C., M.P. (N.S.W.)  
(Lib.)

##### \*Minister for Defence—

THE HON. D. FAIRBAIRN, D.F.C., M.P.  
(N.S.W.) (Lib.)

##### \*Postmaster-General and Vice-President of the Executive Council—

THE HON. SIR ALAN HULME, K.B.E., M.P.  
(Qld) (Lib.)

##### \*Minister for Shipping and Transport—

THE HON. P. J. NIXON, M.P. (Vic.) (C.P.)

##### \*Minister for Labour and National Service—

THE HON. P. R. LYNCH, M.P. (Vic.) (Lib.)

##### \*Minister for Education and Science—

THE HON. J. M. FRASER, M.P. (Vic.) (Lib.)

##### Minister for External Territories—

THE HON. C. E. BARNES, M.P. (Qld) (C.P.)

##### Minister for Immigration—

THE HON. A. J. FORBES, M.C., M.P. (S.A.)  
(Lib.)

##### Minister for Social Services—

THE HON. W. C. WENTWORTH, M.P. (N.S.W.)  
(Lib.)

##### Minister for Works—

SENATOR THE HON. R. C. WRIGHT (Tas.) (Lib.)

##### Minister for Civil Aviation—

SENATOR THE HON. R. C. COTTON (N.S.W.)  
(Lib.)

*Minister for Customs and Excise, Deputy Leader of the House and Minister assisting the Minister for National Development—*

THE HON. D. L. CHIPP, M.P. (Vic.) (Lib.)

*Minister for Air—*

SENATOR THE HON. T. C. DRAKE-BROCKMAN, D.F.C. (W.A.) (C.P.)

*Minister for the Army and Minister assisting the Treasurer—*

THE HON. A. S. PEACOCK, M.P. (Vic.) (Lib.)

*Minister for Repatriation and Minister assisting the Minister for Trade and Industry—*

THE HON. R. McN. HOLTEN, M.P. (Vic.) (C.P.)

*Attorney-General—*

SENATOR THE HON. I. J. GREENWOOD, Q.C. (Vic.) (Lib.)

*Minister for the Navy—*

THE HON. M. G. MACKAY, M.P. (N.S.W.) (Lib.)

*Minister for the Interior—*

THE HON. R. J. D. HUNT, M.P. (N.S.W.) (C.P.)

*Minister for Housing*

THE HON. K. M. K. CAIRNS, M.P. (Qld) (Lib.)

*Minister for the Environment, Aborigines and the Arts and Minister in Charge—Tourist Activities*  
THE HON. P. HOWSON, M.P. (Vic.) (Lib.)

*Minister for Supply—*

THE HON. R. V. GARLAND, M.P. (W.A.) (Lib.)

*Assistant Ministers—*

*Assistant Minister assisting the Minister for Labour and National Service—*

THE HON. A. A. STREET, M.P. (Vic.) (Lib.)

*Assistant Minister Assisting the Prime Minister—*

THE HON. J. D. M. DOBIE, M.P. (N.S.W.) (C.P.)

*Assistant Minister assisting the Postmaster-General—*

THE HON. I. ROBINSON, M.P. (Vic.) (C.P.)

*Assistant Minister assisting the Minister for Health and Leader of the Government in the Senate—*

SENATOR THE HON. J. E. MARRIOTT (Tas.) (Lib.)

*Assistant Minister assisting the Minister for Primary Industry—*

THE HON. R. S. KING, M.P. (Vic.) (C.P.)

*Assistant Minister assisting the Minister for Civil Aviation—*

THE HON. J. E. McLEAY, M.P. (S.A.) (Lib.)

\* Minister in the Cabinet.

## Commonwealth Parliament

## THE SENATE—OCTOBER 1971

*President:*

SENATOR THE HON. SIR MAGNUS CAMERON CORMACK, K.B.E.

*Chairman of Committees:*

SENATOR E. W. PROWSE

*Leader of the Government in the Senate:*

SENATOR THE HON. SIR KENNETH MCCOLL ANDERSON

*Leader of the Opposition in the Senate:*

SENATOR L. K. MURPHY, Q.C.

<i>Senator</i>	<i>State</i>	<i>Term(a) expires 30 June</i>	<i>Senator</i>	<i>State</i>	<i>Term(a) expires 30 June</i>
Anderson, Hon. Sir Kenneth (Lib.)	N.S.W.	1977	Lawrie, A. G. E. (C.P.)	Qld	1977
Bishop, R. (A.L.P.)	S.A.	1974	Lillico, A. E. D. (Lib.)	Tas.	1977
Bonner, N. T. (Lib.)	Qld	(b)	Little, J. A. (A.D.L.P.)	Vic.	1974
Brown, W. W. C. (A.L.P.)	Vic.	1977	McAuliffe, R. E. (A.L.P.)	Qld	1977
Buttfield, Nancy E. (Lib.)	S.A.	1974	McClelland, D. (A.L.P.)	N.S.W.	1974
Byrne, C. B. (A.D.L.P.)	Qld	1974	McClelland, J. R. (A.L.P.)	N.S.W.	1977
Cameron, D. N. (A.L.P.)	S.A.	1977	McLaren, G. T. (A.L.P.)	S.A.	1977
Cant, H. G. J. (A.L.P.)	W.A.	1977	McManus, F. P. (A.D.L.P.)	Vic.	1977
Carrick, J. L. (Lib.)	N.S.W.	1977	Marriott, Hon. J. E. (Lib.)	Tas.	1977
Cavanagh, J. L. (A.L.P.)	S.A.	1974	Maunsell, C. R. (C.P.)	Qld	1974
Cormack, Hon. Sir Magnus, K.B.E. (Lib.)	Vic.	1974	Milliner, B. R. (A.L.P.)	Qld	1974
Cotton, Hon. R. C. (Lib.)	N.S.W.	1974	Mulvihill, J. A. (A.L.P.)	N.S.W.	1977
Davidson, G. S. (Lib.)	S.A.	1977	Murphy, L. K., Q.C. (A.L.P.)	N.S.W.	1974
Devitt, D. M. (A.L.P.)	Tas.	1977	Negus, S. A. (Ind.)	W.A.	1977
Drake-Brockman, Hon. T. C., D.F.C. (C.P.)	W.A.	1977	O'Byrne, J. (A.L.P.)	Tas.	1977
Drury, A. J. (A.L.P.)	S.A.	1977	Poke, A. G. (A.L.P.)	Tas.	1974
Durack, P. D. (Lib.)	W.A.	1977	Poyser, A. G. (A.L.P.)	Vic.	1974
Fitzgerald, J. F. (A.L.P.)	N.S.W.	1974	Primmer, C. G. (A.L.P.)	Vic.	1977
Gair, Hon. V. C. (A.D.L.P.)	Qld	1977	Prowse, E. W. (C.P.)	W.A.	1974
Georges, G. (A.L.P.)	Qld	1974	Rae, P. E. (Lib.)	Tas.	1974
Gietzelt, A. T. (A.L.P.)	N.S.W.	1977	Sim, J. P. (Lib.)	W.A.	1974
Greenwood, Hon. I. J., Q.C. (Lib.)	Vic.	1977	Townley, M. (Ind.)	Tas.	1977
Guilfoyle, Margaret G. C. (Lib.)	Vic.	1977	Turnbull, R. J. D. (Ind.)	Tas.	1974
Hannan, G. C. (Lib.)	Vic.	1974	Webster, J. J. (C.P.)	Vic.	1974
Jessop, D. S. (Lib.)	S.A.	1977	Wheeldon, J. M. (A.L.P.)	W.A.	1977
Kane, J. T. (A.D.L.P.)	N.S.W.	1974	Wilkinson, L. D. (A.L.P.)	W.A.	1974
Keeffe, J. B. (A.L.P.)	Qld	1977	Willesee, D. R. (A.L.P.)	W.A.	1974
Laucke, C. L. (Lib.)	S.A.	1974	Withers, R. G. (Lib.)	W.A.	1974
			Wood, I. A. C. (Lib.)	Qld	1977
			Wriedt, K. S. (A.L.P.)	Tas.	1974
			Wright, Hon. R. C. (Lib.)	Tas.	1974
			Young, H. W. (Lib.)	S.A.	1974

(a) Senators are elected for a term of six years on a rotational basis; the terms of half the Senators expire every third year. (b) Filling casual vacancy.

## THE HOUSE OF REPRESENTATIVES

Following the retirement of the Rt. Hon. Sir John McEwen, G.C.M.G., C.H., M.P. (C.P.) Murray (Vic.), Mr B. Lloyd (C.P.) was elected to fill the vacancy.

## CHAPTER 4. DEFENCE

In August 1971 the Government announced that all Australian combat forces would be withdrawn from Vietnam. This withdrawal was scheduled to begin within the next two months and most of the combat elements were expected back in Australia by Christmas 1971.

At the same time the Government pledged that, as withdrawal of forces proceeded, Australia would provide other military assistance and economic aid for the Republic of Vietnam. An amount of \$25 million would be spent over the next three years on defence aid in the form of military equipment and training, and on civil projects. Seven million dollars would be spent on this assistance in the current financial year.

With the withdrawal of combat forces from Vietnam, the Government concluded that a reduction of some 4,000 could be made in the number of men serving full-time in the army. This reduction would be effected by reducing the period of full-time national service from two years to eighteen months.

## CHAPTER 7. POPULATION

## Australia-wide censuses, pages 120-2

The following tables give preliminary results of the Census of 30 June 1971 compiled by field personnel during the taking of the Census. They show the population of the States and Territories of Australia together with comparative final figures for the previous Census taken in 1966.

At the 1966 Census, in conformity with Section 127 of the Constitution, Aborigines were excluded from the published population. In 1967 the Constitution was altered to remove this provision, and the 1971 Census therefore includes Aborigines. In order to provide comparability between the two censuses the 1966 population in these tables has been amended to include Aborigines and therefore differs from the 1966 population figures on pages 120-2.

## POPULATION: STATES AND TERRITORIES OF AUSTRALIA

State or Territory	Census 30 June 1966(a)			Census 30 June 1971		
	Males	Females	Persons	Males	Females	Persons
New South Wales . . . . .	2,126,652	2,111,249	4,237,901	2,302,110	2,287,446	4,589,556
Victoria . . . . .	1,614,240	1,605,977	3,220,217	1,748,916	1,747,245	3,496,161
Queensland . . . . .	849,390	824,934	1,674,324	919,992	903,370	1,823,362
South Australia . . . . .	550,196	544,788	1,094,984	585,827	586,947	1,172,774
Western Australia . . . . .	432,569	415,531	848,100	527,217	500,155	1,027,372
Tasmania . . . . .	187,391	184,045	371,436	196,284	193,590	389,874
Northern Territory . . . . .	31,159	25,345	56,504	48,159	37,360	85,519
Australian Capital Territory . . . . .	49,991	46,041	96,032	73,513	70,330	143,843
<b>Australia . . . . .</b>	<b>5,841,588</b>	<b>5,757,910</b>	<b>11,599,498</b>	<b>6,402,018</b>	<b>6,326,443</b>	<b>12,728,461</b>

(a) See text above.

POPULATION: NUMERICAL AND PERCENTAGE INCREASES BETWEEN  
30 JUNE 1966 AND 30 JUNE 1971

State or Territory	Numerical increase	Percentage increase	Average annual rate of growth
		Per cent	Per cent
New South Wales . . . . .	351,655	8.30	1.61
Victoria . . . . .	275,944	8.57	1.66
Queensland . . . . .	149,038	8.90	1.72
South Australia . . . . .	77,790	7.10	1.38
Western Australia . . . . .	179,272	21.14	3.91
Tasmania . . . . .	18,438	4.96	0.97
Northern Territory . . . . .	29,015	51.35	8.64
Australian Capital Territory . . . . .	47,811	49.79	8.42
<b>Australia . . . . .</b>	<b>1,128,963</b>	<b>9.73</b>	<b>1.87</b>



## CHAPTER 10. LABOUR, WAGES AND PRICES

## Average weekly earnings, page 250

This section contains estimates of average weekly earnings per employed male unit of each State and Australia for the period September quarter 1966 to December quarter 1970, and for Australia only for the period September quarter 1961 to June quarter 1966. Figures previously published for periods to December quarter 1970 have been revised.

The estimates of average weekly earnings are derived from particulars of employment and wages and salaries recorded on payroll tax returns, from other direct collections and from estimates of the unrecorded balance. The figures relate to civilians only. In addition to salary and wage payments at award rates, the total earnings figures used in the calculation of average weekly earnings include the earnings of employees not covered by awards, overtime earnings, over-award and bonus payments, payments made in advance or retrospectively during the period, etc.

The employment series used in the calculation was revised during 1970 to incorporate new benchmarks derived from 1966 population census data, but the changes could not be introduced into the average weekly earnings series until investigation of a number of other aspects of the estimation method had been carried out. This has now been completed and the necessary revisions to the earnings series have been made.

Particulars of wages and salaries paid are not available for males and females separately from the sources used for this series; average weekly earnings have therefore been calculated in terms of male units, i.e. total male employees plus a proportion of female employees, the proportion being determined by the estimated ratio of female to male average earnings.

In the previous series the same ratio, namely 55 per cent, was used for Australia and for each State, because sufficient information was, until recently, not available to enable different ratios to be used for the several States. In the present revision, information from the annual surveys of weekly earnings and hours, from a sample survey carried out in November 1969 and from other sources, has been used to estimate different percentages for individual States. The ratios used for the revised series from September quarter 1966 are as follows: New South Wales (including the Australian Capital Territory) 54 per cent, Victoria 53, Queensland 52, South Australia (including the Northern Territory) 50, Western Australia 49 and Tasmania 49. As the number of male units used in calculating Australian average weekly earnings is the sum of the estimates for the States, a separate ratio for Australia as a whole is not used, but the weighted average of the State ratios is approximately 52.5 per cent.

The effect of using lower ratios is, in the absence of other factors, to increase the level of the average weekly earnings series. This change would therefore have tended to raise the estimated overall average and also to raise the averages for the smaller States, particularly South Australia, Western Australia and Tasmania, in comparison with those for New South Wales and Victoria. However, the opportunity has been taken to incorporate a number of other improvements to the method of estimation. For example, an analysis of data obtained through surveys carried out in 1966 and 1967 has enabled an explicit allowance to be made in the revised series for the effect of multiple jobholding and data from a survey in November 1969 have given a more accurate indication of average earnings in fields not covered by payroll tax returns and other direct collections. The total effect of these various factors has generally been to raise the level of the average weekly earnings series. The revised estimates for each State and Australia are shown in the next table.

The quarterly figures in money terms are affected by seasonal influences. For example, special payments, including prepayment for holiday periods, tend to raise the December quarter and to depress the March quarter averages. In addition, figures for all quarters are affected by the varying incidence of pay days in successive quarters. Allowance for the varying incidence of pay days and for seasonal factors has been made in calculating the seasonally adjusted estimates shown in the tables. It should also be noted that seasonal adjustment factors were estimated from a series adjusted to allow for the effects of major awards and determinations of Commonwealth and State industrial authorities. The effects of these awards and determinations are retained in the seasonally adjusted data. Seasonally adjusted estimates are now shown in money terms, the previously published index, based on the year 1953-54 = 100, having been discontinued.

AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT<sup>(a)</sup>

(\$)

Period	N.S.W.(b)	Vic.	Qld	S.A.(c)	W.A.	Tas.	Australia	
							Original	Seasonally adjusted
1966-67	63.50	63.90	57.10	57.60	59.20	58.40	61.70	..
1967-68	67.00	67.60	60.20	61.10	63.90	61.90	65.30	..
1968-69	72.70	72.10	64.30	65.20	68.70	65.60	70.20	..
1969-70	78.80	78.10	69.20	70.90	75.50	70.80	76.10	..
1966—September quarter	62.40	63.20	56.30	57.30	59.10	56.60	60.90	60.70
December	64.60	65.50	59.00	58.40	60.40	60.30	63.10	61.10
1967—March	61.30	60.70	54.50	56.00	57.50	56.70	59.30	62.00
June	65.40	66.00	58.60	58.60	59.90	60.00	63.50	63.20
September	65.70	66.80	59.10	60.30	62.20	60.20	64.20	64.20
December	68.10	69.80	62.30	62.00	64.80	64.30	66.90	64.90
1968—March	65.20	64.40	57.40	59.60	62.20	60.10	63.00	65.50
June	69.00	69.30	61.80	62.20	66.30	63.10	67.10	66.80
September	69.70	69.60	61.80	63.70	66.70	62.80	67.60	67.70
December	75.30	74.00	66.10	66.60	69.70	68.40	72.30	69.80
1969—March	70.50	70.30	61.90	63.80	67.30	63.50	68.30	71.70
June	75.20	74.60	67.30	66.60	71.20	67.50	72.60	72.20
September	76.20	76.00	67.60	69.30	73.30	68.80	73.90	73.60
December	81.60	80.80	71.50	72.90	78.00	73.90	78.70	75.00
1970—March	74.90	74.30	65.90	68.10	72.70	66.30	72.50	77.10
June	82.30	81.10	71.90	73.50	78.00	74.30	79.10	78.80
September	83.50	82.10	73.90	76.10	80.50	74.40	80.70	80.00
December	89.70	87.50	79.10	78.70	85.70	80.50	86.10	81.90

(a) See explanatory notes on page 1065. (b) Includes the Australian Capital Territory. (c) Includes the Northern Territory.

Because of the adoption of a new definition of the labour force at the June 1966 population census, which resulted in the inclusion of a larger number of part-time employees than formerly, there is a break in comparability between June and September quarters of 1966 in the employment series used in the calculation of average weekly earnings. For this and other reasons (in particular, the lack of precise information about the ratios of female to male earnings in the several States for 1965-66 and earlier years), it is not possible to make a comparable series of State estimates for periods prior to September quarter 1966. However, in order to provide a broad indication of trends over a longer period, estimates for Australia as a whole have been calculated for the period back to September quarter 1961 by methods and on a basis that are as nearly as possible comparable with those used for the current series. These estimates are shown in the next table.

AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT(a), AUSTRALIA  
(\$)

<i>Period</i>	<i>Original</i>	<i>Seasonally adjusted</i>	<i>Period</i>	<i>Original</i>	<i>Seasonally adjusted</i>
1961-62 . . . .	47.60	..	1963—September quarter .	49.80	50.30
1962-63 . . . .	48.90	..	December " .	54.10	51.60
1963-64 . . . .	51.50	..	1964—March " .	49.10	51.30
1964-65 . . . .	55.30	..	June " .	52.80	52.10
1965-66 . . . .	57.90	..	September " .	54.10	53.80
1961—September quarter .	46.70	47.10	December " .	57.50	55.10
December " .	49.20	47.30	1965—March " .	53.00	55.80
1962—March " .	45.70	48.00	June " .	56.60	56.40
June " .	48.80	48.30	September " .	57.60	57.10
September " .	47.90	48.40	December " .	59.60	57.40
December " .	50.50	48.50	1966—March " .	55.50	58.20
1963—March " .	46.90	49.30	June " .	58.70	58.40
June " .	50.30	49.70			

(a) See explanatory notes on page 1065

The seasonally adjusted index for the manufacturing industry, which was published up to June quarter 1970, has not been included in this section. This index was based on the average earnings of male wage and salary earners employed in factories as disclosed by annual manufacturing censuses, manufacturing estimates for periods subsequent to the most recent manufacturing census being based on pay-roll tax data. The 1968-69 census, unlike its predecessors, did not provide particulars of average earnings for males and females separately. When detailed results of this census become available the feasibility of republishing the manufacturing index will be examined.

## CHAPTER 18. PUBLIC FINANCE

## COMMONWEALTH FINANCE

## Commonwealth Budget, 1971-72

(see page 1055 for particulars of 1970-71 Budget)

The 1971-72 Commonwealth Budget provided for an estimated outlay of \$8,900 million (\$8,190 million in 1970-71) and estimated receipts of \$8,890 million (\$8,114 million in 1970-71). The deficit for 1971-72 was thus estimated at \$11 million (\$75 million in 1970-71).

## Outlay

## OUTLAY OF COMMONWEALTH BUDGET

(\$ million)

	1970-71	1971-72 Estimates
Outlay—		
Net expenditure on goods and services—		
Current expenditure—		
War and defence . . . . .	1,068	1,180
Repatriation . . . . .	93	108
Development of resources and assistance to industry . . . . .	177	199
Civil aviation . . . . .	43	49
Immigration . . . . .	60	55
Law, order and public safety . . . . .	19	23
Education . . . . .	57	66
Public health and welfare . . . . .	78	94
Foreign affairs . . . . .	35	41
All other . . . . .	347	401
	1,977	2,216
Capital expenditure—		
Public enterprises—		
Houses and flats . . . . .	9	227
Other . . . . .	23	
Public authorities—		
Transport . . . . .	76	227
Other . . . . .	115	
	223	227
Total . . . . .	2,200	2,443
Transfer payments—		
Cash benefits to persons . . . . .	1,771	2,001
Grants to States . . . . .	2,207	2,281
Interest paid . . . . .	576	600
Overseas grants and contributions . . . . .	185	197
Subsidies . . . . .	309	347
Grants for private capital purposes . . . . .	35	36
Total . . . . .	5,083	5,462
Total Expenditure . . . . .	7,283	7,905
Net advances—		
to States—Works purposes . . . . .	366	511
Housing agreement . . . . .	126	
Other . . . . .	27	50
	520	561
to Commonwealth authorities—Post Office . . . . .	247	255
S.M.H.E.A. . . . .	27	16
Airlines . . . . .	20	62
Other . . . . .	46	47
	340	380
to Other sectors—by War Service Homes . . . . .	17	16
Other . . . . .	30	39
	47	54
Total . . . . .	907	995
Total Outlay . . . . .	8,190	8,900



The main increases in Budget allocation in 1971-72 over 1970-71 were in the fields of war and defence (from \$1,068 million to \$1,168 million), of payments to the States (from \$2,727 million to \$2,841 million) of cash benefits to persons (from \$1,771 million to \$2,001 million) and of subsidies (from \$309 million to \$347 million). The estimated increases are due mainly to the following additional commitments.

*Payments to the States (grants and net advances)*

An estimated overall increase of \$114 million in payments to the States does not include additional State receipts consequent on the transfer of pay-roll tax.

*Cash benefits to persons.*

*Repatriation Benefits* (weekly rates). *War pensions*: Special rate, \$42.50, Intermediate rate, \$30.25; General rate, \$12.00; special compensation allowance, \$4.50 to \$6.00; War widows—pension, \$17.25; domestic allowance, \$8.00; War orphans—one parent dead, \$7 for the first child and \$7 for each other child; both parents dead, \$14 for each child. *Service pensions*: single rate, \$17.25; married rate (both pensioners), \$15.25 each (*see* Chapter 5 Repatriation).

*Social Service Benefits* (weekly rates). Age and Invalid pensions and Sheltered Employment allowances: single rate, \$17.25, married rate (both eligible), \$15.25 each. Widows pensions: Class 'A' \$17.25; Class 'B' and Class 'C' \$15.25. Long-term Sickness Benefits: higher rates become payable after six weeks as follows—\$17.25 for an adult or married minor, and \$11.25 for a person aged 16 and under 21 years. In addition, supplementary assistance of \$2 (maximum) may be payable. Persons who are in hospital and have no dependants do not qualify for these higher benefits (*see* Chapter 13 Welfare Services).

*Health Benefits* (weekly rates). Tuberculosis allowances: single person \$20.50, man and wife, \$33.75. Subsidised Medical Services: free health insurance for hospital and medical fund benefits is provided for family groups, of at least two units, where the family income does not exceed \$46.50 a week. The Commonwealth will also pay two-thirds the cost of the usual insurance rates for these benefits where the family income is between \$46.50 and \$49.50 a week; and one-third of the usual rates where the family income is between \$49.50 and \$52.50 a week. Except for persons eligible to receive assistance under the Subsidised Health Insurance Scheme, the patient contribution per pharmaceutical prescription rose from \$0.50 to \$1.00 (*see* Chapter 14 Public Health).

*Subsidies*. An estimated increase of \$38 million in the cost of assistance to Australian industry by way of subsidies and/or bounties by way of contribution to promotion and research was largely due to the 1971-72 arrangements for deficiency payments for wool.

**Receipts**

**RECEIPTS OF COMMONWEALTH BUDGET**

(\$ million)

	1970-71	1971-72 Estimates
Receipts—		
Taxation—		
Indirect taxes . . . . .	2,501	2,580
Income taxes on companies . . . . .	1,444	1,566
Income taxes on persons—P.A.Y.E. . . . .	2,432	2,859
Other . . . . .	743	800
Estate and gift duties . . . . .	78	86
Other direct taxes, fees, fines, etc. . . . .	47	48
Total . . . . .	7,244	7,939
Other receipts—		
Interest, rent and dividends . . . . .	800	877
Gross income of public enterprises . . . . .	60	64
Net sales of existing assets . . . . .	10	9
Total . . . . .	870	950
Total Receipts . . . . .	8,114	8,890

Proposed increases in tax rates included: *Income tax*, Individuals—increase in additional levy from  $2\frac{1}{2}$  per cent to 5 per cent (at the same time the maximum deduction allowable to an individual taxpayer for education expenses was increased from \$300 to \$400 per student and the age limit of students for purposes of deductions for both education expenses and maintenance was increased from 21 to 25 years. Child adoption expenses became allowable for the first time); Companies—variation of differential rates (providing—inter alia—for the general public company rate of  $47\frac{1}{2}$  per cent to apply to the whole of the income of public companies other than income taxed at special rates; for private companies, the rate on the first \$10,000 of taxable income to be  $37\frac{1}{2}$  per cent and to be  $42\frac{1}{2}$  per cent on the balance; and the present rate of  $37\frac{1}{2}$  per cent still to apply to the taxable income of Friendly Society Dispensaries); *Customs and Excise Duties*, Petroleum products—increase of 2 cents per gallon together with the removal of by-law exemptions; Tobacco products—increases of 50 cents per lb on cigarettes and cigars and 25 cents per lb on manufactured tobacco.

Further increases were proposed in broadcast listeners' and television viewers' licence fees, light dues, and postal charges.

### Other Commonwealth taxation

#### *Pay-roll tax*

*Pay-roll Tax Agreement between the States and the Commonwealth, June 1971.* The agreement between the Commonwealth and the States following upon the June 1971 Premiers' Conference provided for the transfer of pay-roll tax to the States from a date to be proclaimed following the passage of legislation by the Commonwealth and each of the States. Additions to State revenues from the imposition of pay-roll tax are partly to be offset by specific reductions in financial assistance grants payable to each of the States. The transfer was eventually effected as from 1 September 1971 enabling the States to receive the first of their monthly pay-roll tax collections in October 1971.

The Commonwealth continued however to impose pay-roll tax in the two internal Commonwealth territories. The rate of tax payable in the territories is  $2\frac{1}{2}$  per cent with a statutory exemption of wages up to \$1,733.33 per month (\$20,800 per annum) or a proportion of that amount in the case of an employer who is also an employer in a State.

The pay-roll tax export rebate scheme which was due to expire at 30 June 1973 is replaced for the years 1971–72 and 1972–73 by a system of direct grants calculated by reference to increases in exports.

## CHAPTER 21. EMPLOYMENT AND UNEMPLOYMENT

The labour force survey, page 688

When Chapter 21 was sent for press, estimates for persons employed in agriculture and in other industries, were under review. Revised estimates are shown in the following table.

PERSONS<sup>(a)</sup> EMPLOYED IN AGRICULTURE AND IN OTHER INDUSTRIES:  
AUSTRALIA<sup>(b)</sup> MAY 1967 TO 1971  
(<sup>'000</sup>)

Industry	May				
	1967	1968	1969	1970	1971
MALES					
Agriculture . . . . .	369.8	359.9	350.8	352.5	343.2
Other industries . . . . .	3,023.6	3,099.2	3,193.6	3,278.3	3,340.7
<i>Total</i> . . . . .	<i>3,393.4</i>	<i>3,459.1</i>	<i>3,544.4</i>	<i>3,630.8</i>	<i>3,683.9</i>
MARRIED WOMEN					
Agriculture . . . . .	43.7	41.2	40.7	49.9	50.2
Other industries . . . . .	715.5	776.6	835.8	912.6	990.2
<i>Total</i> . . . . .	<i>759.2</i>	<i>817.7</i>	<i>876.6</i>	<i>962.5</i>	<i>1,040.4</i>
OTHER FEMALES <sup>(c)</sup>					
Agriculture . . . . .	11.9	11.9	11.5	14.2	11.6
Other industries . . . . .	691.2	696.5	689.9	706.7	706.5
<i>Total</i> . . . . .	<i>703.1</i>	<i>708.4</i>	<i>701.4</i>	<i>720.9</i>	<i>718.0</i>
ALL FEMALES					
Agriculture . . . . .	55.6	53.1	52.3	64.1	61.8
Other industries . . . . .	1,406.7	1,473.0	1,525.7	1,619.2	1,696.6
<i>Total</i> . . . . .	<i>1,462.3</i>	<i>1,526.1</i>	<i>1,578.0</i>	<i>1,683.4</i>	<i>1,758.4</i>
PERSONS					
Agriculture . . . . .	425.4	413.0	403.1	416.7	405.0
Other industries . . . . .	4,430.2	4,572.2	4,719.3	4,897.5	5,037.3
<i>Total</i> . . . . .	<i>4,855.7</i>	<i>4,985.2</i>	<i>5,122.4</i>	<i>5,314.2</i>	<i>5,442.3</i>

(a) For a note on persons excluded see explanatory notes on page 688. (b) See NOTE following table on page 691. The figures for agriculture and other industries have been revised, and therefore differ from figures shown in previous issues. (c) Never married, widowed and divorced.

## CHAPTER 30. MISCELLANEOUS

**Journey to work and journey to school**

In May 1970 a survey, based on the quarterly population survey sample (a one per cent sample of households), was conducted throughout Australia in order to obtain information about the principal means of transport by which employed persons travelled to work and full-time students travelled to school, university or other type of educational institution, the time at which they usually left home, and the time they usually spent on the journey.

The survey covered all persons aged five years and over, except members of the permanent armed forces, national servicemen enlisted in the Regular Army Supplement and certain diplomatic personnel customarily excluded from census and estimated populations. Questions were not asked of patients in institutions such as hospitals and sanatoria, and inmates of gaols, etc., for whom, for the purposes of the survey, the institution was regarded as their dwelling. The journey to work questions were not asked of persons permanently unable to work, or of persons who were not at work during the survey period. The journey to school questions were asked of all persons in the age group 5 to 14 years, as well as all other persons aged 15 and over whose main activity during the survey period was reported as attendance at a school, university, etc.

The results of the survey indicate that in May 1970, of 4.21 million persons in Australia who travelled to work, 2.64 million, or 62.8 per cent, travelled by car, either as drivers or passengers, 11.1 per cent travelled by bus, 10.5 per cent by train, and 10.0 per cent walked. The proportion of persons travelling to work by car varied between 58.4 per cent in New South Wales and 70.3 per cent in South Australia. Outside the capital cities the proportion travelling by car was generally higher, averaging 71.0 per cent, while within the capital cities it averaged 59.1 per cent.

One-third (34.1 per cent) of all persons travelling to work took less than 15 minutes over the journey. Of persons living in the capital cities, however, only one-quarter (23.7 per cent) took less than 15 minutes, whereas of persons living outside the capital cities, considerably more than half (57.5 per cent) were able to make the journey in this time.

Another third (30.5 per cent) of all persons took between 15 minutes and half an hour over the journey and one-third (34.8 per cent) took half an hour or more. Of persons living in the capital cities, 43.4 per cent took half an hour or more over the journey, whereas for persons living outside these cities the figure was 15.7 per cent.

1.65 million persons (39.3 per cent) left home regularly before 7.30 a.m., a further 1.6 million (38.1 per cent) left regularly between 7.30 and 8.30 a.m., while 0.9 million (21.0 per cent) left regularly at 8.30 or later.

Of almost 2.8 million full-time students who travelled to schools, universities or other educational institutions, 43.5 per cent walked, 25.7 per cent travelled by bus and 15.7 per cent went by car. Children of different ages had significantly different travel patterns. More than half of those aged 5-9 years walked to school, and about one-fifth were taken by car. In the higher school ages there was an increasing use of public transport, 45.9 per cent of pupils aged 13 and 14, and 47.5 per cent of those aged 15, 16 and 17 travelling by this means. At ages 18 and 19, 20.4 per cent of full-time students drove cars and at ages 20 and over the proportion was 46.0 per cent.

Over half the journeys to schools, universities or other educational institutions were of short duration (less than fifteen minutes); nevertheless, about 513,000 full-time students, or 18.5 per cent of the total, had journeys lasting half an hour or more.

The meaning of the principal terms used is as follows:

(i) *Persons who worked* comprise all those who, during the survey week,

(a) did any work for pay, profit, commission or payment in kind, in a job or business, or on a farm (including employees, employers and self-employed persons), or

(b) worked fifteen hours or more without pay in a family business (or farm),

with the exception of those who reported that their major activity in the survey week was attendance at a school, university, or other educational institution.

(ii) *Full-time students who travelled to school, etc.* comprise all persons aged 5 to 14 years who usually travelled to school, and persons aged 15 years and over who usually travelled to school, university or other educational institution and whose major activity during the survey week was reported as attendance at a school, university, etc. Excluded are boarders at schools, etc., persons taking correspondence courses and persons who were not attending an educational institution.



- (iii) *Method of travel* refers to the principal method used. Where two or more methods were used the principal method was taken as that which was used for the greatest distance. The category 'other', shown for example in the next table, includes, amongst other things, travel by taxi or as a pillion passenger on a motor cycle. Public transport refers to transport by train, bus, tram or ferry.
- (iv) *Duration of journey* refers to the time taken by a person to travel from the door of his place of residence to the entrance of his place of work or school, etc.
- (v) *Capital cities*. Estimates for State capital cities relate to persons residing within the boundaries of the relevant Statistical Divisions. Explanatory notes on the delimitation of urban boundaries and maps showing the boundaries of the capital city Statistical Divisions were published in *Census of the Commonwealth of Australia, 30 June 1966—Field Count Statement No. 4*.

For further details reference should be made to the mimeographed bulletin *Journey to Work and Journey to School, May 1970—Preliminary Statement* (Reference No. 17.4).

For information on reliability of estimates and further particulars of the quarterly population survey see Chapter 21, page 688.

### ALL PERSONS WHO WORKED, BY METHOD OF TRAVEL TO WORK, MAY 1970

<i>Method of travel to work</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(a)</i>
NUMBER ('000)							
Public transport(b)	454.8	313.2	94.7	64.1	52.9	15.5	1,002.3
Train	228.3	160.3	33.6	10.3	10.0	*	443.4
Bus	212.8	78.9	60.3	51.9	42.6	14.6	468.2
Tram or ferry	13.6	74.0	*	*	*	*	90.7
Car	921.3	738.8	354.7	268.7	214.7	87.5	2,642.4
As driver	732.6	589.5	277.3	209.1	173.2	70.5	2,097.8
As passenger	188.6	149.4	77.4	59.6	41.5	17.0	544.6
Motor cycle or scooter	13.5	4.7	7.6	5.1	*	*	37.3
Bicycle	15.0	22.5	12.7	14.9	5.1	*	71.0
Walked	154.5	128.4	53.0	27.5	28.9	19.8	421.2
Other	18.9	5.4	5.0	*	*	*	36.4
<i>Total persons who travelled</i>	<i>1,578.0</i>	<i>1,213.1</i>	<i>527.8</i>	<i>382.5</i>	<i>307.3</i>	<i>127.1</i>	<i>4,210.7</i>
Worked at home(c)	255.1	177.9	144.6	76.5	87.1	21.8	773.1
<b>Total</b>	<b>1,833.1</b>	<b>1,391.0</b>	<b>672.4</b>	<b>459.0</b>	<b>394.4</b>	<b>148.8</b>	<b>4,983.8</b>

### PROPORTION OF PERSONS WHO TRAVELLED TO WORK (PER CENT)

Public transport(b)	28.8	25.8	17.9	16.8	17.2	12.2	23.8
Train	14.5	13.2	6.4	2.7	3.3	*	10.5
Bus	13.5	6.5	11.4	13.6	13.8	11.5	11.1
Tram or ferry	0.9	6.1	*	*	*	*	2.2
Car	58.4	60.9	67.2	70.3	69.9	68.9	62.8
As driver	46.4	48.6	52.5	54.7	56.4	55.5	49.8
As passenger	12.0	12.3	14.7	15.6	13.5	13.4	12.9
Motor cycle or scooter	0.9	0.4	1.4	1.3	*	*	0.9
Bicycle	1.0	1.9	2.4	3.9	1.7	*	1.7
Walked	9.8	10.6	10.0	7.2	9.4	15.6	10.0
Other	1.2	0.4	1.0	*	*	*	0.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Includes the Northern Territory and the Australian Capital Territory. (b) For definition, see text above.  
 (c) Includes persons such as farmers, persons whose residence was at the same address or attached to their place of business, and self-employed persons (e.g. television repairers) who operated a business from their home, etc.

\* Estimates less than 4,000 are not published because they would be subject to sampling variability too high for most practical purposes. Although figures for these components can be derived by subtraction, they should not be regarded as reliable.

**ALL PERSONS WHO TRAVELLED TO WORK, BY METHOD OF TRAVEL, CAPITAL CITIES<sup>(a)</sup>  
AND OTHER AREAS, MAY 1970**

(Per cent)

<i>Method of travel to work</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(b)</i>
<b>CAPITAL CITIES<sup>(a)</sup></b>							
Public transport(c)	36.7	30.9	28.5	19.6	21.0	19.7	30.6
Train	19.8	16.5	11.3	2.9	4.3	*	14.5
Bus	15.7	6.9	17.0	16.0	16.5	18.3	13.1
Tram or ferry	1.2	7.5	*	*	*	..	3.0
Car	53.4	58.0	63.6	69.5	69.8	64.2	59.1
As driver	43.4	46.2	49.2	53.3	56.3	51.6	47.1
As passenger	9.9	11.8	14.4	16.2	13.5	12.6	12.0
Bicycle	0.4	1.3	*	4.4	*	*	1.2
Walked	7.9	9.1	5.7	5.0	6.6	14.4	7.8
Other	1.6	0.7	1.6	1.6	*	*	1.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>OTHER AREAS</b>							
Public transport(c)	11.7	6.7	4.9	7.1	*	6.4	8.4
Bus	8.7	5.1	4.6	5.2	*	6.2	6.7
Car	69.3	71.8	71.6	72.9	70.1	72.5	71.0
As driver	53.0	57.5	56.7	59.5	56.6	58.5	55.9
As passenger	16.3	14.3	15.0	13.4	13.5	14.0	15.1
Bicycle	2.1	4.1	4.6	*	*	*	2.8
Walked	13.8	16.2	15.4	14.8	18.5	16.5	15.0
Other	3.1	1.2	3.4	3.0	*	*	2.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Statistical Divisions. See page 1073. (b) Figures for other areas include the Northern Territory and the Australian Capital Territory. (c) For definition see page 1073.

\* Based on a figure less than 4,000. See note to previous table.

**FULL-TIME STUDENTS WHO TRAVELLED TO SCHOOL, ETC.(a), BY METHOD OF TRAVEL  
MAY 1970**

<i>Method of travel to school, etc.</i>	<i>N.S.W.</i>	<i>Vic.</i>	<i>Qld</i>	<i>S.A.</i>	<i>W.A.</i>	<i>Tas.</i>	<i>Aust.(b)</i>
NUMBER ('000)							
Public transport(a)	360.9	182.3	113.5	60.2	62.6	37.1	829.9
Train	46.3	25.5	11.0	*	*	*	86.5
Bus	313.7	131.4	102.4	57.2	61.5	36.9	716.5
Tram or ferry	*	25.4	*	*	*	*	26.9
Car	134.9	125.5	68.7	43.9	40.7	13.3	437.6
As driver	9.3	9.9	4.2	*	*	*	31.1
As passenger	125.6	115.6	64.5	40.5	37.8	12.5	406.5
Bicycle	51.2	92.2	60.7	47.0	33.9	*	293.3
Walked	440.0	383.4	142.4	108.7	74.8	37.6	1,210.1
Other	4.5	*	*	*	*	*	12.2
<b>Total</b>	<b>991.5</b>	<b>786.8</b>	<b>386.5</b>	<b>261.5</b>	<b>212.5</b>	<b>91.6</b>	<b>2,783.1</b>
PROPORTION OF TOTAL (PER CENT)							
Public transport(a)	36.4	23.2	29.4	23.0	29.5	40.5	29.8
Train	4.7	3.2	2.8	*	*	*	3.1
Bus	31.6	16.7	26.5	21.9	29.0	40.2	25.7
Tram or ferry	*	3.2	*	*	*	*	1.0
Car	13.6	15.9	17.8	16.8	19.2	14.5	15.7
As driver	0.9	1.3	1.1	*	*	*	1.1
As passenger	12.7	14.7	16.7	15.5	17.8	13.6	14.6
Bicycle	5.2	11.7	15.7	18.0	15.9	*	10.5
Walked	44.4	48.7	36.8	41.6	35.2	41.0	43.5
Other	0.5	*	*	*	*	*	0.4
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) For definition, see page 1073.

(b) Includes the Northern Territory and the Australian Capital Territory.

\* Less than or based on a figure less than 4,000. See note to table on page 1073.





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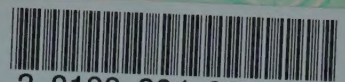
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